A GUIDE TO THE TURF.

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COCKING, HAZARD, & OTHER GAMES.

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ADVERTISEMENT.

THE following Treatiſe is intended as a Guide to young Adventurers, to lay their bets to the beſt advantage, and as a Manual to the more accompliſhed Sportſmen.—I will not contend on the importance of it to the community; but its general utility muſt be obvious to every Gentleman of the Turf.

I have endeavoured to ſtate the various queſtions in the ſimpleſt and moſt accurate manner; and every ſolution is proved by Hedging. How far I have ſucceeded, I leave to ſuperior judgements to decide.

The firſt part conſiſts of the various Changes of Two, Three, and Four Events; the Second, Inſtructions how to Bet againſt a Field; the Third, how to bet between Two in a Field, neither win no bet; the Fourth and laſt part conſiſts of Tables of Two and Three Events, from ſix to one for you, to ſix to one againſt you; in which may be ſeen, at one view, the accurate odds in every change.

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GUIDE, &c.

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THE laws of chance, on the various bets which are to be laid at horſe-racing, are here elucidated, explained, and laid down, with the different methods of hedging to the different kind of bets; and in ſo conſpicuous a manner, as to enable any gentleman to lay his complicated bets either accurately or nearly, as it ſuits him.

In the firſt place, you are to take notice, that the probability of an event happening is to the probability of its failing, as the number of different ways by which it may happen, is to the number of different ways by which it may fail; and is greater or leſs, according to the number of chances whereby it may happen or fail. Thus, if I have an event of three to two in my favour, it may be repreſented in vulgar fractions thus, $\frac{3}{5}$; and if it were three to two againſt me, my value in that ſtake would be $\frac{2}{5}$, as the whole ſtake depending is five: the firſt being three to two for me, conſequently entitles me to three-fifths of the whole ſtake; and where it is three to two againſt me, my value in that ſtake is only two-fifths, as repreſented in the fraction.

Suppoſe there are two events: even betting on the firſt, which I ſhall call *A*; and five to four in favour of the ſecond, which I ſhall call *B*; What are the accurate odds which I am to lay you againſt *A* and *B* both winning?

Here *A* is entitled to one half of the firſt event; but as that event depends upon the event of the other, he who takes the odds againſt *A* and *B* both winning, is only entitled to one half of five-ninths of the whole ſtake, or the ſum depending; and is operated in vulgar fractions by multiplying the two numerators together for a new numerator, and the two denominators for a new denominator: thus $\frac{1}{2} \times \frac{5}{9} := \frac{5}{18}$ 18—5=13 to 5, which ſhews it to be 13 to 5 againſt *A* and *B* both winning. In this operation, by multiplying the two numerators together, you have five for a new numerator; and by multiplying the two denominators together for a new denominator, you have eighteen, which ſhews the value of *A* and *B* both winning to be $\frac{5}{18}$; and by ſubſtracting the numerator five from the denominator eighteen, the remainder is thirteen: therefore, it is thirteen to five againſt *A* and *B*, as before.

As the different algebraical ſigns or characters which I ſhall make uſe of in the different operations, may fall under the hands of thoſe who are unacquainted with them, I here give the notation for each ſign, as they will help to facilitate the different operations.

+, this is called more; and anſwers for addition.

—, this is called leſs; and anſwers for ſubſtraction.

×, this for involution or multiplication.

=, this for equality, or equal to.

When you want to know the odds on two, three, or more different events, you are firſt to be particular in ſetting down fractionally the value which you are entitled to in each event, and the dependency that one event has on another.

Suppoſe there are two events, even betting on each, what are the odds which I am to bet you, that you do not name the two winners?

In this, your value or expectation on both events is one half of one half, and is ſet down in vulgar fractions, and operated thus: $\frac{1}{2} \times \frac{1}{2} = \frac{1}{4}$: $4 - 1 = 3$ to 1: therefore, three to one are the odds which I am to bet you, that you do not name both the winners; and is proved by hedging, thus: ſuppoſing that I had laid you three guineas to one, that you did not name both the winners, I am then to bet one guinea, that you win the firſt (in hedging, you are to take notice, that in moſt caſes you are to begin with the ſum which you lay the odds to, continuing the aggregate ſum till all the events are decided); and if you win that, I am then to bet two guineas, that you win the ſecond; if you do, I then win three guineas by hedging, which ſerves to pay the three guineas that I had laid to one againſt your winning both; and is a convincing proof of the fractional operation being juſt.

Suppoſe there are two events, even betting on the firſt, and ſix to four on the favourite in the ſecond, what are the odds which I am to lay you, that you do not name both the winners?

$\frac{1}{2}\times\frac{3}{5}=\frac{3}{10}$: 10—3=7 to 3, which ſhews it to be ſeven to three, that I am to lay you againſt naming both the winners; and is proved by hedging, thus: on the firſt event, I lay three guineas that you win it; and on the ſecond, I am to lay ſix to four that you win that; both thoſe events you are ſuppoſed to win; (and I ſhall continue yon the winner in all the following caſes, where I lay down the method of hedging to each event, till all the events are over) my aggregate ſum is then ten guineas, and by taking the three guineas from it, which I began to hedge with, there will be ſeven left, which will pay the ſeven to three which I laid you againſt your naming both the winners.

What are the odds which I am to lay you, that you do not loſe both events?

$\frac{1}{2}\times\frac{2}{5}=\frac{2}{10}$: 10—2=8, which ſhews it to be eight to two, or contracted, is four to one that you do not loſe both.

PROOF BY HEDGING.

I am, on the firſt, to bet one guinea; and on the ſecond I am to take three to two: ſo here I win four by hedging, which pays the four I loſt with you.

Suppoſe it to be even betting on the firſt, and ſeven to four in your favour on the ſecond, what are the odds which I am to lay you againſt your winning them both?

$\frac{1}{2} \times \frac{7}{11} = \frac{7}{22} : 22 - 7 = 15$ to 7, the anſwer.

PROOF BY HEDGING.

I am to bet ſeven guineas, that you win the firſt; and on the ſecond I am to bet fourteen to eight: here I win by hedging $7 + 8 = 15$, which pays the fifteen I loſt with you.

What are the odds which I am to lay you, that you do not loſe both? $\frac{1}{2} \times \frac{4}{11} = \frac{4}{22} : 22 - 4 = 18$ to 4, or 9 to 2, the anſwer.

PROOF BY HEDGING.

I am to bet two guineas, that you loſe the firſt; and I am to take ſeven to four that you loſe the ſecond: here I get $2 + 7 = 9$, which pays you.

Suppoſe there are two events, even betting on the firſt, and two to one on the favourite in the ſecond, what are the odds againſt your naming both the winners?

$\frac{1}{2}\times\frac{2}{3}=\frac{2}{6}$: $6-2=4$ to 2, or 2 to 1, the anſwer.

PROOF BY HEDGING.

On the firſt event I bet one guinea that you win it; and on the ſecond I bet two guineas to one: ſo that I get by hedging, $1+1=2$, which pays the above.

What are the odds againſt your loſing both? $\frac{1}{2}\times\frac{1}{3}=\frac{1}{6}$: $6-1=5$ to 1, the anſwer.

PROOF BY HEDGING.

I am to bet one guinea that you loſe the firſt, and on the ſecond I am to take four to two: ſo that I win by hedging, $1+4=5$, which pays the above.

Suppoſe it to be even betting on the firſt event, and five to two in your favour on the ſecond, what are the odds againſt your winning them both? $\frac{1}{2}\times\frac{5}{7}=\frac{5}{14}$: $14-5=9$ to 5, the anſwer.

PROOF BY HEDGING.

On the firſt event I am to bet five guineas; and on the ſecond I am to bet ten to four: ſo that I get $5+4=9$, which pays the above.

What are the odds againſt your loſing both? $\frac{1}{2}\times\frac{2}{7}=\frac{2}{14}$: $14-2=12$ to 2, or 6 to 1, the anſwer.

PROOF BY HEDGING.

On the firſt event I bet one guinea that you loſe it; and on the ſecond I take five to two: here I get $1+5=6$, which pays the above.

Suppoſe it to be even betting on the firſt event, and three to one in your favour on the ſecond, what are the odds againſt your winning both? $\frac{1}{2}\times\frac{3}{4}=\frac{3}{8}$: $8-3=5$ to 3, the anſwer.

PROOF BY HEDGING.

On the firſt I am to bet three guineas that you win it; and on the ſecond I am to lay ſix guineas to two: here I get by hedging, $3+2$, which pays you,

What are the odds againſt your loſing both? $\frac{1}{2}\times\frac{1}{4}=\frac{1}{8}$: $8-1=7$ to 1, the anſwer.

PROOF.

I am to bet one guinea that you loſe the firſt; and on the ſecond I am to take ſix guineas to two: here I get by hedging, $1+6=7$, which pays the ſeven to one.

Suppoſe there are two events, five to four on each in your favour, what are the odds againſt your winning both?

$\frac{5}{9}\times\frac{5}{9}=\frac{25}{81}$: $81-25=56$ to 25, the anſwer.

PROOF.

On the firſt I am to lay twenty-five to twenty; and on the ſecond I am to lay forty-five to thirty-ſix: in this I get by hedging $20+36=56$, which pays you.

What are the odds againſt the weak ſides winning both? $\frac{4}{9}\times\frac{4}{9}=\frac{16}{81}$: $=81-16=65$ to 16, the anſwer.

PROOF.

I am to take twenty to ſixteen on the firſt; and on the ſecond I am to take forty-five to thirty-ſix: I get $20+45=65$, which pays you.

Suppoſe it to be five to four on the firſt, and ſix to four on the ſecond, both in your favour, what odds am I to lay you, againſt your winning both? $\frac{5}{9}\times\frac{3}{5}=\frac{15}{45}$: $45-15=30$ to 15, or two to one, the anſwer.

PROOF.

On the firſt event I am to bet fifteen to twelve; and on the ſecond, twenty-ſeven to eighteen: in this I get $12+18=30$, which pays you.

What are the odds againſt the weak ſides winning both events?
$\frac{4}{9}\times\frac{2}{5}=\frac{8}{45}$: $45-8=37$ to 8, the anſwer.

PROOF.

On the firſt event I am to take ten to eight; and on the ſecond, twenty-ſeven to eighteen: here I get $10+27=37$, which pays.

Suppoſe it to be five to four on the firſt event, and ſeven to four on the ſecond, both in your favour; what are the odds againſt your winning both? $\frac{5}{9}\times\frac{7}{11}=\frac{35}{99}$: $99-35=64$ to 35, the anſwer.

PROOF.

On the firſt I bet thirty-five to twenty-eight; and on the ſecond I bet ſixty-three to thirty-ſix: in this I get $28+36=64$; which pays.

What are the odds againſt your loſing both? $\frac{4}{9}\times\frac{4}{11}=\frac{16}{99}$: $99-16=83$ to 16, the anſwer.

PROOF.

On the firſt I am to take twenty to ſixteen; and on the ſecond, ſixty-three to thirty-ſix: here I get $20+63=83$, which pays.

What are the odds that you loſe the firſt, and win the ſecond? $\frac{4}{9}\times\frac{7}{11}=\frac{28}{99}$: $99-28=71$ to 28, the anſwer.

PROOF.

On the firſt event I take thirty-five to twenty-eight; and on the ſecond I am to lay ſixty-three to thirty-ſix: here I get $35+36=71$, which pays.

What are the odds that you win the firſt, and loſe the ſecond? $\frac{5}{9}\times\frac{4}{11}=\frac{20}{99}$: $99-20=79$ to 20, the anſwer.

PROOF.

On the firſt event I am to bet twenty to ſixteen; and on the ſecond, I am to take ſixty-three to thirty-ſix: in this I get $16+63=79$, which pays.

Suppoſe it to be five to four on the firſt event, and two to one on the ſecond, both in your favour, what are the odds againſt your winning them both?
$\frac{5}{9}\times\frac{2}{3}=\frac{10}{27}$: $27-10=17$ to 10, the anſwer.

PROOF.

On the firſt I lay ten to eight; and on the ſecond I lay eighteen to nine: I get $8+9=17$, which pays.

What are the odds againſt your loſing both?
$\frac{4}{9}\times\frac{1}{3}=\frac{4}{27}$: $27-4=23$ to 4, the anſwer.

PROOF.

On the firſt I am to take five to four; and on the ſecond I take eighteen to nine: here I get $5+18=23$, which pays.

Suppoſe it to be five to four on the firſt, and five to two on the ſecond, both in your favour, what are the odds againſt your winning both? $\frac{5}{9}\times\frac{5}{7}=\frac{25}{63}$: $63-25=38$ to 25, the anſwer.

PROOF.

PROOF.

On the firſt I bet twenty-five to twenty; and on the ſecond, I bet forty-five to eighteen: here I get 20+18=38, which pays.

What are the odds againſt both the favourites being beaten? $\frac{4}{9}\times\frac{2}{7}=\frac{8}{63}$: 63—8=55 to 8, the anſwer.

PROOF.

On the firſt I take ten to eight; and on the ſecond I take forty-five to eighteen: here I get 10+45=55, which pays.

Suppoſe it to be five to four on the firſt, and three to one on the ſecond, both in your favour, what are the odds againſt your winning both? $\frac{5}{9}\times\frac{3}{4}=\frac{15}{36}$=36—15=21 to 15, the anſwer.

PROOF.

On the firſt I lay fifteen to twelve; and on the ſecond I lay twenty-ſeven to nine: here I get 12+9=21, which pays.

What are the odds againſt your loſing both? $\frac{4}{9}\times\frac{1}{4}=\frac{4}{36}$: 36—4=32 to 4, or 8 to 1, the anſwer.

PROOF

PROOF.

On the firſt I take five to four; and on the ſecond I take twenty-ſeven to nine: here I get $5+27=32$, which pays.

What are the odds againſt your loſing the firſt, and winning the ſecond? $\frac{4}{9}\times\frac{3}{4}=\frac{12}{36}$: $36-12=24$ to 12, or 2 to 1, the anſwer.

PROOF.

On the firſt I take fifteen to twelve; and on the ſecond I lay twenty-ſeven to nine: here I get $15+9=24$, which pays.

What are the odds againſt your winning the firſt, and loſing the ſecond? $\frac{5}{9}\times\frac{1}{4}=\frac{5}{36}$: $36-5=31$ to 5, the anſwer.

PROOF.

On the firſt I lay five to four; and on the ſecond I take twenty-ſeven to nine: here I get $4+27=31$, which pays.

Suppoſe it to be ſix to four on each, both in your favour, what are the odds againſt your winning both? $\frac{3}{5}\times\frac{3}{5}=\frac{9}{25}$: $25-9=16$ to 9, the anſwer.

PROOF.

PROOF.

On the firſt I lay nine to ſix; and on the ſecond I lay fifteen to ten: in this I get $6+10=16$, which pays.

What are the odds againſt your loſing both? $\frac{2}{5}\times\frac{2}{5}=\frac{4}{25}$: $25-4=21$ to 4, the anſwer.

PROOF.

On the firſt I take ſix to four: and on the ſecond I take fifteen to ten: here I get $6+15=21$, which pays.

What are the odds againſt your winning the firſt, and loſing the ſecond? $\frac{3}{5}\times\frac{2}{5}=\frac{6}{25}$: $25-6+19$ to 6, the anſwer.

PROOF.

On the firſt I lay ſix to four; and on the ſecond I take fifteen to ten: here I get $4+15=19$, which pays.

This is a remarkable caſe; for, if you have two equal events, it is no more than three to one againſt your winning them both: and in this, it being three to two in your favour of one, and three to two againſt you, in the other, upon a curſory view, it appears to be the ſame odds as laying againſt two equal events;

events: notwithſtanding, it is obvious, both by the fractional operation, and the proof by hedging, that the odds are 19 to 6, which are $3\frac{1}{6}$ to 1.

What are the odds, that the favourites win one, and loſe the other? For the ſolution of this I muſt have recourſe to an algebraical method, which is, by ſquaring of $A+B$; and there I find it to be thirteen to twelve, that the favourites do not win one, and loſe the other; and is to be proved, by hedging in a different manner from any of the former caſes.

PROOF.

Suppoſing that I had laid thirteen to twelve, I am to begin with taking the odds to two ſhillings, on the firſt event; if the favourite loſes it, I have then fifteen ſhillings of hedging money, including the twelve, which was the ſum I laid the odds to. On the ſecond event I am to lay the fifteen to ten, on the favourite; here if it ſhould come off ſo that the favourites loſe the firſt, and win the ſecond, I then get by hedging $3+10=13$, which pays.

Suppoſe the favourite had won the firſt, I then had ten ſhillings left out of the twelve:

therefore, I ſhould have taken fifteen to the ten that the weak ſide had won the ſecond; and if ſo, I then got thirteen by hedging, which paid as before.

Suppoſe it to be three to two on the firſt event, and ſeven to four on the ſecond, both in your favour, what are the odds againſt your loſing them both? $\frac{3}{5} \times \frac{7}{11} = \frac{21}{55}$: $55 - 21 = 34$ to 21, the anſwer.

PROOF.

On the firſt I lay twenty-one to fourteen, and on the ſecond I lay thirty-five to twenty: in this I get $14 + 20 = 34$, which pays.

What are the odds againſt your loſing both? $\frac{2}{5} \times \frac{4}{11} = \frac{8}{55}$: $55 - 8 = 47$ to 8, the anſwer.

PROOF.

On the firſt I take twelve to eight; and on the ſecond, I take thirty-five to twenty: here I get $12 + 35 = 47$, which pays.

Suppoſe it to be ſix to four on the firſt, and two to one on the ſecond, both in your favour, what are the odds againſt your winning both? $\frac{3}{5} \times \frac{2}{3} = \frac{6}{15}$: $15 - 6 = 9$ to 6, the anſwer,

PROOF.

On the firſt I lay ſix to four; and on the ſecond I lay ten to five: in this I get $4+5=9$, which pays.

What are the odds againſt your loſing both? $\frac{2}{5}\times\frac{1}{3}=\frac{2}{15}$: $15-2=13$ to 2, the anſwer.

PROOF.

On the firſt I take three to two; and on the ſecond I take ten to five: here I get $3+10=13$, which pays.

What are the odds againſt your loſing the firſt, and winning the ſecond? $\frac{2}{5}\times\frac{2}{3}=\frac{4}{15}$: $15-4=11$ to 4, the anſwer.

PROOF.

I take ſix to four on the firſt event; and on the ſecond I lay ten to five: here I get $6+5=11$, which pays.

What are the odds againſt your winning the firſt, and loſing the ſecond? $\frac{3}{5}\times\frac{1}{3}=\frac{3}{15}$: $15-3=12$ to 3, or 4 to 1, the anſwer.

PROOF.

On the firſt event I lay three to two; and on the ſecond I take ten to five: here I get $2+10=12$, which pays.

Suppoſe it to be three to two on the firſt event, and five to two on the ſecond, what are the odds againſt your winning them both? $\frac{3}{5}\times\frac{5}{7}=\frac{15}{35}$: 35—15=20 to 15, or 4 to 3, the anſwer.

PROOF.

On the firſt event I am to lay fifteen to ten; and on the ſecond I am to lay twenty-five to ten: in this I get $10+10=20$, which pays.

What are the odds againſt loſing both? $\frac{2}{5}\times\frac{2}{7}=\frac{4}{35}$: 35—4=31 to 4, the anſwer.

PROOF.

On the firſt I take ſix to four; and on the ſecond I take twenty-five to ten: in this I get $6+25$, which pays.

Suppoſe it to be three to two on the firſt event, and three to one on the ſecond, both in your favour, what are the odds againſt your winning them both? $\frac{3}{5}\times\frac{3}{4}=\frac{9}{20}$: 20—9=11 to 9, the anſwer.

PROOF.

On the firſt event I lay nine to ſix; and on the ſecond I lay fifteen to five: here I get $6+5=11$, which pays.

What are the odds againſt your loſing both? $\frac{2}{5}\times\frac{1}{4}=\frac{2}{20}$: $20-2=18$ to 2, or 9 to 1, the anſwer.

PROOF.

On the firſt event I take three to two; and on the ſecond I take fifteen to five: here I get $3+15$, which pays.

Suppoſe there are two events, ſeven to four on each in your favour, what are the odds againſt your winning both? $\frac{7}{11}\times\frac{7}{11}=\frac{49}{121}$: $121-49=72$ to 49, the anſwer.

PROOF.

On the firſt event I lay forty-nine to twenty-eight; and on the ſecond I lay ſeventy-ſeven to forty-four: here I get $28+44=72$, which pays.

What are the odds againſt your loſing them both?

$\frac{4}{11}\times\frac{4}{11}=\frac{16}{121}$: $121-16=105$ to 16, the anſwer.

PROOF.

On the firſt event I am to take 28 to 16: and on the ſecond, I take 77 to 44: here I get $28+77=105$, which pays.

What are the odds againſt your winning one, and loſing the other?

The ſolution of this is to be inveſtigated by the former algebraical method, which is, by ſubſtituting a for the ſtrong ſide, and b for the weak ſide; and in this I will ſuppoſe a equal to 7, and b equal to 4: therefore, by ſquaring of $a+b$, you have $a^2+2ab+bb$; which gives $2ab$ in favour of the two events coming off; one of the ſtrong ſide, and the other of the weak ſide; and is $=56$: $a^2+bb=65$; which is 65 to 56 againſt your winning one, and loſing the other.

PROOF.

This muſt be hedged and proved in a different manner from the fractional operations; for, inſtead of beginning as uſual with 56, which was the ſum I laid the odds to, I muſt only begin with twelve, and to take the odds to that twelve, which is twenty-one that the weak ſide wins the firſt; if it ſhould, I then lay ſeventy-ſeven to forty-four that the ſtrong ſide wins the ſecond: if the two events come off ſo, I get $21+44=65$, which pays. But ſuppoſe the ſtrong ſide had won the firſt, I then ſhould have loſt twelve out of the fifty-ſix, and ſhould have but forty-four left, and to that forty-four I ſhould have taken ſeventy-ſeven that the weak ſide won the ſecond; ſo that if it had come off this way I ſhould equally have gotten fifty-ſix by hedging: thus, $77-12=65$, which pays as before.

Suppoſe it to be two to one in your favour on both events, what are the odds againſt your winning both? $\frac{2}{3}\times\frac{2}{3}=\frac{4}{9}$: $9-4=5$ to 4, the anſwer

PROOF.

On the firſt event I lay four to two; and on the ſecond I lay ſix to three: here I get $2+3=5$, which pays

What are the odds againſt your loſing both? $\frac{1}{3}\times\frac{1}{3}=\frac{1}{9}$: $9-1=8$ to 1, the anſwer.

PROOF.

PROOF.

On the firſt event I take two to one; and on the ſecond I take ſix to three: here I get $6+2=8$, which pays.

What are the odds againſt your winning one only out of the two? $a+b$ ſquared, is $= a^2+2\,a\,b+b\,b$. Here a is $=2$, and b is $=1$, which reduced, is $4+4+1=9$; and ſhews it to be five to four that it does not come off one and one, *i. e.* by your winning one and loſing the other; and is proved by hedging, thus: on the firſt event I take two to one that the weak ſide wins it; and on the ſecond I lay ſix to three that the ſtrong ſide wins: here I get $2+3$, which pays, if it ſhould come off ſo. Suppoſe the ſtrong ſide ſhould have won the firſt, I then ſhould have had but three left out of the hedging-money; therefore, on the ſecond event I ſhould have taken ſix to three that the weak ſide had won it: here I likewiſe get five by hedging, which pays.

Suppoſe it to be two to one on the firſt, and five to two on the ſecond, both in your favour, what are the odds againſt your winning both? $\frac{2}{3}\times\frac{5}{7}=\frac{10}{21}$: 21—10=11 to 10, the anſwer.

PROOF.

On the firſt event I lay ten to five; and on the ſecond I lay fifteen to ſix: here I get 5+6=11, which pays.

Suppoſe it to be two to one on the firſt event, and three to one on the ſecond, both in your favour, what am I to lay you againſt your winning both? $\frac{2}{3}\times\frac{3}{4}=\frac{6}{12}$: 12—6=6 to 6, the anſwer; which ſhews it to be even betting againſt both the favourites winning.

PROOF.

On the firſt event I lay ſix to three; and on the ſecond I lay nine to three: here I get 3+3=6, which pays.

What are the odds againſt your loſing both? $\frac{1}{3}\times\frac{1}{4}=\frac{1}{12}$: 12—1=11 to 1, the anſwer.

PROOF.

On the firſt event I take two to one; and on theſe cond I take nine to three: here I get 2+9=11, which pays

Suppoſe it to be five to two on each, both in your favour, what muſt I bet you againſt your winning both? $\frac{5}{7}\times\frac{5}{7}=\frac{25}{49}$: $49-25=$ 24 to 25, the anſwer.

PROOF.

On the firſt I lay twenty-five to ten; and on the ſecond I lay thirty-five to fourteen: here I get $10+14=24$, which pays.

What are the odds againſt your loſing both? $\frac{2}{7}\times\frac{2}{7}=\frac{4}{49}$: $49-4=45$ to 4, the anſwer.

PROOF.

On the firſt I take ten to four; and on the ſecond I take thirty-five to fourteen: here I get $10+35=45$, which pays.

What are the odds againſt your winning only one event out of the two?

This is anſwered by the ſquare of $a+b$, as in former caſes; a being equal to 5, and b equal to two, which is 29 to 20.

PROOF.

On the firſt I take the odds to ſix that the weak ſide wins it; and on the ſecond I lay thirty-five to fourteen that the ſtrong ſide wins: in this form I get $15+14=29$, which pays. Suppoſe the ſtrong ſide had won the firſt, I then ſhould have had but fourteen left out of the twenty, (which I call hedging money) to which fourteen I ſhould have taken thirty-five: here I ſhould have gotten $35-6=29$, which pays as before.

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THREE EVENTS.

SUPPOSE you have three matches, or any three equal events, what are the odds againſt your winning them all? $\frac{1}{2}\times\frac{1}{2}\times\frac{1}{2}=\frac{1}{8}$: $8-1=7$ to 1, the anſwer.

PROOF.

On the firſt event I bet one guinea that you win it; on the ſecond I bet two; and on the third I bet four: here I get $1+2+4=7$, which pays.

Suppoſe it to be equal betting on the two firſt, and ſix to four on the third in your favour, what are the odds againſt your winning them all? $\frac{1}{2}\times\frac{1}{2}\times\frac{3}{5}=\frac{3}{20}$: 20—3=17 to 3, the anſwer.

PROOF.

On the firſt I bet 3; on the ſecond I bet 6; and on the third I lay 12 to 8: here I get $3+6+8=17$, which pays.

What are the odds againſt your winning the two firſt, and loſing the third, or loſing them all, which is equally the ſame?

$\frac{1}{2}\times\frac{1}{2}\times\frac{2}{5}=\frac{2}{20}$:20—2=18 to 2, or 9 to 1, the anſwer.

PROOF.

On the firſt event I ſhall bet one (ſuppoſing I had laid nine to one); on the ſecond I bet two; and on the third I take ſix to four: here I get $1+2+6=9$, which pays.

Suppoſe it to be equal betting on the firſt, five to four on the ſecond, and ſix to four on the third, all in your favour, what are the odds againſt your winning them all?

$\frac{1}{2} \times \frac{5}{9} \times \frac{3}{5} = \frac{15}{90}$: $90 - 15 = 75$ to 15, or 5 to 1, the anſwer.

PROOF.

On the firſt event I bet fifteen; on the ſecond I lay thirty to twenty-four; and on the third I lay fifty-four to thirty-ſix: here I get $15 + 24 + 36 = 75$, which pays.

What are the odds againſt your loſing them all?

$\frac{1}{2} \times \frac{4}{9} \times \frac{2}{5} = \frac{8}{90}$: $90 - 8 = 82$ to 8, the anſwer.

PROOF.

On the firſt event I bet eight; on the ſecond I take twenty to ſixteen; and on the third I take fifty-four to thirty-ſix: here I get $8 + 20 + 54 = 82$, which pays.

What are the odds againſt your winning the two firſt, and loſing the third?

$\frac{1}{2} \times \frac{5}{9} \times \frac{2}{5} = \frac{10}{90}$: $90 - 10 = 80$ to 10, or 8 to 1, the anſwer.

PROOF.

On the firſt event I bet ten; on the ſecond I lay twenty to ſixteen; and on the third I take fifty-four to 36: here I get $10+16+54=80$, which pays.

Suppoſe it to be ſix to four on the firſt, two to one on the ſecond, and five to two on third, all in your favour, what are the odds againſt your winning the three? $\frac{3}{5}\times\frac{2}{3}\times\frac{5}{7}=\frac{30}{105}$: $105-30=75$ to 30, the anſwer.

PROOF.

On the firſt event I lay thirty to twenty; on the ſecond I lay fifty to twenty-five; and on the third I lay ſeventy-five to thirty: here I get $20+25+30=75$, which pays.

What are the odds againſt your loſing them all? $\frac{2}{5}\times\frac{1}{3}\times\frac{2}{7}=\frac{4}{105}$: $105-4=101$ to 4, the anſwer.

PROOF.

On the firſt event I take ſix to four; on the ſecond I take twenty to ten; and on the third I take ſeventy-five to thirty: here I get $6+20+75=101$, which pays.

What are the odds againſt your winning the firſt, and loſing the ſecond and third? $\frac{3}{5}\times\frac{1}{3}\times\frac{2}{7}=\frac{6}{105}$: $105-6=99$ to 6, the anſwer.

PROOF

PROOF.

On the firſt event I lay ſix to four; on the ſecond I take twenty to ten; and on the third I take ſeventy-five to thirty: here I get $4+20+75=99$, which pays.

What are the odds againſt your winning the firſt and ſecond, and loſing the third? $\frac{3}{5}\times\frac{2}{3}\times\frac{2}{7}=\frac{12}{105}$: $105-12=93$ to 12, the anſwer.

PROOF.

On the firſt event I lay twelve to eight; on the ſecond I lay twenty to ten; and on the third I take ſeventy-five to thirty: here I get $8+10+75=93$, which pays.

Suppoſe it to be two to one in your favour on each event, what are the odds againſt your winning the three events? $\frac{2}{3}\times\frac{2}{3}\times\frac{2}{3}=\frac{8}{27}$: $27-8=19$ to 8, the anſwer.

PROOF.

On the firſt event I lay eight to four; on the ſecond I lay twelve to ſix; and on the third I lay eighteen to nine: here I get $4+6+9=19$, which pays.

What are the odds againſt your loſing all? $\frac{1}{3}\times\frac{1}{3}\times\frac{1}{3}=\frac{1}{27}$: $27-1=26$ to 1, the anſwer.

PROOF

PROOF.

On the firſt event I take two to one; on the ſecond I take ſix to three; and on the third I take eighteen to nine: here I get $2+6+18=26$, which pays.

What are the odds againſt your winning any aſſigned two, and loſing the other? $\frac{2}{3}\times\frac{2}{3}\times\frac{1}{3}=\frac{4}{27}$: $27-4=23$ to 4, the anſwer.

PROOF.

On the firſt event I bet four to two; on the ſecond I bet ſix to three; and on the third I take eighteen to nine: here I get $2+3+18=23$, which pays.

What are the odds againſt any aſſigned one winning, and loſing the other two? $\frac{2}{3}\times\frac{1}{3}\times\frac{1}{3}=\frac{2}{27}$: $27-2=25$ to 2, the anſwer.

PROOF.

On the firſt event I lay two to one; on the ſecond I take ſix to three; and on the third I take eighteen to nine: here I get $1+6+18=25$, which pays.

What are the odds againſt the ſtrong ſide winning two only out of the three?

For the ſolution of this $a+b$ muſt be cubed or raiſed to the third power, making $a=2$, and $b=1$, which will ſtand thus, $a^3+3a^2b+3ab^2+b^3$; and ſhews it to be fifteen to twelve, or five to four, the anſwer.

PROOF.

The firſt is to remain neuter, and if the favourite or ſtrong ſide ſhould win it, I am then to take ſix to three that the weak ſide wins the ſecond; if it does, it will then be one and one; and if the ſtrong ſide ſhould win the third, I loſe my bet of fifteen to twelve: therefore, to guard againſt that, as I have now in hand, including the twelve hedging-money, and the ſix that I won on the ſecond event, eighteen, which I am to lay to nine, on the ſtrong ſide; and if the ſtrongſide wins it, I then get $6+9=15$, which pays the 15 to 12.

Suppoſe the ſtrong ſide had loſt the firſt, I then ſhould have laid twelve to ſix that the ſtrong ſide won the ſecond; if he had, it then would be one and one; therefore I am to back the ſtrong ſide on the third event, by laying eighteen to nine; if he wins that, I then loſe my fifteen to twelve; and get by hedging $6+9=15$, as before.

Suppoſe the ſtrong ſide had won the firſt and ſecond events, I ſhould have nine left out of the hedging-money; to which nine I ſhould have taken eighteen; and if the weak ſide had won the third, I ſhould have gotten by hedging $18-3=15$, which would have paid, as before.

You are to obſerve, that there are three different forms for each ſide to come off two and one only, as appears by the cube or third power of *a b*, and ſhall lay each form down in a more conſpicuous and conciſe manner, wherein I ſhall ſubſtitute the letter S. for the ſtrong ſide, and W. for the weak ſide; and ſhall continue to do ſo in all parallel caſes.

To give the proof to theſe algebraical ſolutions more conſpicuouſly, I have ſet down the hedging-money in hand on each event, either by adding to, or taking from, as the event comes off.

THE FIRST FORM.

Suppoſing I had laid five to four;

On the firſt event I ſtand neuter; 4 S. wins.

On the ſecond ditto I take 2 to 1; 3 S. wins.
On the third ditto I take 6 to 3; 9 W. wins.

In this I get 6—1=5, which pays.

THE SECOND.

On the firſt I ſtand neuter; 4 S. wins.
On the ſecond I take 2 to 1; 6 W. wins.
On the third I lay 6 to 3; 9 S. wins.

In this I get 2+3=5.

THE THIRD.

On the firſt I ſtand neuter; 4 W. wins.
On the ſecond I lay 4 to 2; 6 S. wins.
On the third I lay 6 to 3; 9 S. wins.

In this I get 2+3=5.

What are the odds againſt the weak ſide winning two events only?

This is anſwered by the former cube of $a+b$; wherein you have $3\,a\,b^2$: being all the chances for the weak ſide coming off two and one, *i. e.* winning two only: $3\,a\,b^2$ reduced, is $=6$, which taken from 27, the whole cube, there will be 21 left; which ſhews the anſwer to be 21 to 6.

THE PROOF IN EACH FORM.

FIRST FORM.

On the firſt event I take 6 to 3 ;	12	W. wins.
On the ſecond I take 6 to 3 ;	18	W. wins.
On the third I lay 18 to 9	27	S. wins.

In this form I get 6+6+9=21 : which pays.

THE SECOND.

On the firſt event I take 6 to 3 ;	12	W. wins.
On the ſecond I take 6 to 3 ;	9	S. wins.
On the third I take 18 to 9 ;	27	W. wins.

In this form I get 6+18—3=21.

THIRD FORM.

On the firſt event I take 6 to 3 ;	3	S. wins.
On the ſecond I take 6 to 3 ;	9	W. wins.
On the third I take 18 to 9 ;	27	W. wins.

In this form I get 6+18—3=21, as before.

Suppoſe you have three events, two to one on the firſt ; five to two on the ſecond ; and three to one on the third, all in your favour ; what are odds againſt your winning them all ? $\frac{2}{3}\times\frac{5}{7}\times\frac{3}{4}=\frac{30}{84}$: 84—30=54 to 30, the anſwer.

PROOF.

On the firſt event I lay thirty to fifteen; on the ſecond I lay forty-five to eighteen; and on the third I lay ſixty-three to twenty-one: here I get $15+18+21=54$, which pays.

What are the odds againſt your loſing the three events?

$\frac{1}{3}\times\frac{2}{7}\times\frac{1}{4}=\frac{2}{84}$: $84-2=82$ to 2, or 41 to 1, the anſwer.

PROOF.

On the firſt event I take four to two; on the ſecond I take fifteen to ſix; and on the third I take ſixty-three to twenty-one: here I get $4+15+63=82$, which pays.

What are the odds againſt your loſing the firſt, and winning the ſecond and third?

$\frac{1}{3}\times\frac{5}{7}\times\frac{3}{4}=\frac{15}{84}$: $84-15=69$ to 15, the anſwer.

PROOF.

On the firſt event I take thirty to fifteen; on the ſecond I lay forty-five to eighteen; and on the third I lay ſixty-three to twenty-one: here I get $30+18+21=69$, which pays.

What are the odds againſt your winning the firſt and third, and loſing the ſecond? $\frac{2}{3}\times\frac{2}{7}\times\frac{3}{4}=\frac{12}{84}$: $84-12=72$ to 12, or 6 to 1, the anſwer.

PROOF.

On the firſt event I lay twelve to ſix; on the ſecond I take forty-five to eighteen; and on the third I lay ſixty-three to twenty-one: here I get $6+45+21=72$, which pays.

What are the odds againſt your loſing the firſt and third, and winning the ſecond? $\frac{1}{3}\times\frac{5}{7}\times\frac{1}{4}=\frac{5}{84}$: $84-5=79$ to 5, the anſwer.

PROOF.

On the firſt event I take ten to five; on the ſecond I lay fifteen to ſix; and on the third I take ſixty-three to twenty-one: here I get $10+6+63=79$, which pays.

Suppoſe it to be two to one on the firſt event, and three to one on the ſecond and third, all in your favour, what are the odds againſt your winning the three events? $\frac{2}{3}\times\frac{3}{4}\times\frac{3}{4}=\frac{18}{48}$: $48-18=30$ to 18, or 5 to 3, the anſwer.

PROOF

PROOF.

On the firſt event I lay eighten to nine; on the ſecond I lay twenty-ſeven to nine; and on the third I lay thirty-ſix to twelve: here I get $9+9+12=30$, which pays.

What are the odds againſt your loſing them all? $\frac{1}{3}\times\frac{1}{4}\times\frac{1}{4}=\frac{1}{48}$: $48-1=47$ to 1, the anſwer.

PROOF.

On the firſt event I take two to one; on the ſecond I take nine to three; and on the third I take thirty-ſix to twelve: here I get $2+9+36=47$, which pays.

What are odds againſt your winning the firſt, and loſing the ſecond and third; $\frac{2}{3}\times\frac{1}{4}\times\frac{1}{4}=\frac{2}{48}$: $48-2=46$ to 2, or 23 to 1, the anſwer.

PROOF.

On the firſt event I lay two to one; on the ſecond I take nine to three; and on the third I take thirty-ſix to twelve: here I get $1+9+36=46$, which pays.

Suppoſe it to be five to two on the firſt and ſecond, and three to one on the third, all in your favour, what are the odds againſt your winning the three events? $\frac{5}{7} \times \frac{5}{7} \times \frac{3}{4} = \frac{75}{196}$: 196 —75=121 to 75, the anſwer.

PROOF.

On the firſt event I lay ſeventy-five to thirty; on the ſecond I lay one hundred and five to forty-two; and on the third I lay one hundred and forty ſeven to forty-nine: here I get $30+42+49=121$, which pays.

What are the odds againſt your loſing them all? $\frac{2}{7} \times \frac{2}{7} \times \frac{1}{4} = \frac{4}{196}$: 196—4=192 to 4, or 48 to 1, the anſwer.

PROOF.

On the firſt event I take ten to four; on the ſecond I take thirty-five to fourteen; and on the third I take one hundred and forty-ſeven to forty-nine: in this I get $10+35+147 =192$, which pays.

Suppoſe it to be three to one on each in your favour, what are the odds againſt your winning the three? $\frac{3}{4} \times \frac{3}{4} \times \frac{3}{4} = \frac{27}{46}$: 64—27=37 to 27, the anſwer.

PROOF.

PROOF.

On the firſt event I lay twenty-ſeven to nine; on the ſecond I lay thirty-ſix to twelve; and on the third I lay forty-eight to fixteen: here I get $9+12+16=37$, which pays.

What are the odds againſt your loſing them all? $\frac{1}{4}\times\frac{1}{4}\times\frac{1}{4}=\frac{1}{64}$: 64---1=63 to 1, the anſwer.

PROOF.

On the firſt event I take three to one; on the ſecond I take twelve to four; and on the third I take forty-eight to ſixteen: in this I get $3+12+48=63$, which pays.

What are the odds againſty our winning any aſſigned event, and loſing the other two? $\frac{1}{4}\times\frac{3}{4}\times\frac{1}{4}=\frac{3}{64}$: 64—3=61 to 3, the anſwer.

PROOF.

On the firſt event I take nine to three; on the ſecond I lay twelve to four; and on the third I take forty-eight to ſixteen: in this I get $9+4+48=61$, which pays.

What are the odds againſt your winning any aſſigned two, and loſing the other? $\frac{3}{4}\times\frac{3}{4}\times\frac{1}{4}=\frac{9}{64}$: 64—9=55 to 9, the anſwer.

PROOF.

On the firſt event I lay nine to three; on the ſecond I lay twelve to four; and on the third I take forty-eight to ſixteen: here I get $3+4+48=55$, which pays.

What are the odds againſt the ſtrong ſide winning two events only out of the three?

The ſolution of this is inveſtigated by the third power of $a+b$, making $a=3$, and $b=1$; and the anſwer is 37 to 27, which is proved in the three following different changes or forms.

FIRST FORM.

On the firſt event I take 9 to 3;	36	W.	wins.
On the ſecond I lay 36 to 12;	48	S.	wins.
On the third I lay 48 to 16;	64	S.	wins.

In this form I get $9+12+16=37$, which pays.

SECOND

On the firſt I take 9 to 3;	24	S.	wins.
On the ſecond I take 24 to 8;	48	W.	wins.
On the third I lay 48 to 16;	64	S.	wins.

In this form I get $24+16-3=37$, which pays as before.

THIRD.

On the firſt I take 9 to 3; 24 S. wins.
On the ſecond I take 24 to 8; 16 S. wins.
On the third I take 48 to 16; 64 W. wins.

In this form I get 48—8—3=37, which pays as before.

What are the odds againſt the weak ſide winning two only?

The anſwer is 55 to 9, which is the ſame as you had againſt your winning any aſſigned two, and loſing the other.

FIRST FORM.

On the firſt event I take 15 to 5; 24 W. wins.
On the ſecond I take 24 to 8; 48 W. wins.
On the third I lay 48 to 16; 64 S. wins.

In this form I get 15+24+16=55, which pays.

SECOND.

On the firſt I take 15 to 5; 24 W. wins.
On the ſecond I take 24 to 8; 16 S. wins.
On the third I take 48 to 16; 64 W. wins.

In this form I get 15+48—8=55, which pays.

THIRD.

On the firſt event I take 15 to 5; 4 S. wins.
On the ſecond I take 12 to 4; 16 W. wins.
On the third I take 48 to 16 64 W. wins.

In this form I get $12+48-5=55$, which pays.

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FOUR EVENTS.

SUPPOSE you have four events, even betting on each, what are the odds againſt your winning them all? $\frac{1}{2}\times\frac{1}{2}\times\frac{1}{2}\times\frac{1}{2}=\frac{1}{16}$: $16-1=15$ to 1, the anſwer.

PROOF.

On the firſt event I bet one guinea; on the ſecond I bet two; on the third I bet four; and on the fourth I bet eight: here I get $1+2+4+8=15$, which pays.

What are the odds againſt your winning three events only, out of the four?

The ſolution of this is taken from the quadratic, or fourth power of $a+b$; ſuppoſing

$a=1$, and $b=1$, which ſtands thus; $a^4+4a^3b+6a^2b^2+4ab^3+b^4$: out of this power you have but $4a^3b$ in your favour; and reduced into figures is four, being the number of chances for you out of ſixteen, the ſum of the whole power; which makes it twelve to four, or three to one, againſt you.

In this there are four changes.

THE FIRST CHANGE

On the firſt event I bet 2 for you; 6 you win.
On the ſecond I bet two for you; 8 you win.
On the third neuter; 8 you win.
On the fourth I bet 8 againſt you; 16 you loſe.

In this I get 2+2+8=12, which pays.

SECOND CHANGE.

On the firſt event I bet 2 for you; 6 you win.
On the ſecond I bet 2 for you; 8 you win.
On the third neuter; 8 you loſe.
On the fourth I bet 8 for you; 16 you win.

In this I get 2+2+8=12, as beſore.

THIRD CHANGE.

On the firſt event I bet 2 for you; 6 you win.

On the ſecond I bet 2 for you ; 4 you loſe.
On the third I bet 4 for you ; 8 you win.
On the fourth I bet 8 for you ; 16 you win.

In this I get $2+4+8-2=12$, as before.

FOURTH CHANGE.

On the firſt event I bet 2 for you ; 2 you loſe.
On the ſecond I bet 2 for you ; 4 you win.
On the third I bet 4 for you ; 8 you win.
On the fourth I bet 8 for you ; 16 you win.

In this I get $2+4+8-2=12$, as before.

What are the odds againſt your winning two only out of the four events, or their coming off two and two ?

The ſolution of this is likewiſe given by the fourth power of $a+b$, in which you have only $6\,a^2b^2$ in your favour ; and reduced is 6, which is 10 to 6, or 5 to 3 againſt you, the anſwer ; which admits of ſix changes in the proof.

THE FIRST CHANGE.

On the firſt event I ſtand neuter ; 6 you win.
On the ſecond I bet 2 againſt you ; 4 you win.
On the third I bet 4 againſt you ; 8 you loſe.
On the fourth I bet 8 againſt you ; 16 you loſe.

In this I get $4+8-2=10$, which pays.

SECOND CHANGE.

On the firſt event neuter;	6	you win.
On the ſecond I bet 2 againſt you;	8	you loſe.
On the third neuter;	8	you loſe.
On the fourth I bet 8 for you;	16	you win.

In this form I get $2+8=10$, which pays.

THIRD CHANGE,

On the firſt event neuter;	6	you win.
On the ſecond I bet 2 againſt you;	8	you loſe.
On the third neuter;	8	you win.
On the fourth I bet 8 againſt you;	16	you loſe.

In this change I get $2+8=10$, which pays.

FOURTH CHANGE.

On the firſt event neuter;	6	you loſe,
On the ſecond I bet 2 for you;	4	you loſe.
On the third I bet 4 for you;	8	you win.
On the fourth I bet 8 for you;	16	you win.

In this I get $4+8-2=10$, which pays.

FIFTH CHANGE.

On the firſt event neuter;	6	you loſe.
On the ſecond I bet 2 for you;	8	you win.
On the third neuter;	8	you win.

On the fourth I bet 8 againſt you; 16 you loſe.

In this I get $2+8=10$, which pays.

SIXTH CHANGE.

On the firſt event neuter; 6 you loſe.
On the ſecond I bet 2 for you; 8 you win.
On the third neuter; 8 you loſe.
On the fourth I bet 8 for you; 16 you win.

In this I get $2+8=10$, which pays.

Suppoſe that in four events it is even betting on the firſt, three to two on the ſecond, five to four on the third, and ſeven to four on the fourth, all in your favour, what are the odds againſt your winning all the four? $\frac{1}{2}\times\frac{3}{5}\times\frac{5}{9}\times\frac{7}{11}=\frac{105}{990}$: $990-105=885$ to 105, the anſwer.

PROOF.

On the firſt event I bet one hundred and five; on the ſecond I lay two hundred and ten to one hundred and forty; on the third I lay three hundred and fifty to two hundred and eighty; and on the fourth I lay ſix hundred and thirty to three hundred and ſixty: here I get $105+140+280+360=885$, which pays.

What are the odds againſt your loſing all the four? $\frac{1}{2}\times\frac{2}{5}\times\frac{4}{9}\times\frac{4}{11}=\frac{32}{990}$: 990—32= 958 to 32, the anſwer.

PROOF,

On the firſt event I bet thirty-two: on the ſecond I take ninety-ſix to ſixty-four; on the third I take two hundred to one hundred and ſixty; and on the fourth I take ſix hundred and thirty to three hundred and ſixty: here I get 32+96+200+630=958, which pays.

What are the odds againſt your winning the three firſt, and loſing the fourth? $\frac{1}{2}\times\frac{3}{5}\times\frac{5}{9}\times\frac{4}{11}=\frac{60}{990}$: 990—60=930 to 60, the anſwer.

PROOF.

On the firſt event I bet ſixty; on the ſecond I lay one hundred and twenty to eighty; on the third I lay two hundred to one hundred and ſixty; and on the fourth I take ſix hundred and thirty to three hundred and ſixty: here I get 60+80+160+630=930, which pays.

What are the odds againſt your winning the firſt and ſecond, and loſing the third and fourth? $\frac{1}{2}\times\frac{3}{5}\times\frac{4}{9}\times\frac{4}{11}=\frac{48}{990}$: 990—48=942 to 48, the anſwer.

PROOF.

PROOF.

On the firſt event I bet forty-eight; on the ſecond I lay ninety-ſix to ſixty-four; on the third I take two hundred to one hundred and ſixty; and on the fourth I take ſix hundred and thirty to three hundred and ſixty: here I get $48+64+200+630=942$, which pays.

Suppoſe in four events you have three to two in your favour on each, what are the odds againſt your winning them all? $\frac{3}{5}\times\frac{3}{5}\times\frac{3}{5}\times\frac{3}{5}=\frac{81}{625}$: $625-81=544$ to 81, the anſwer.

PROOF.

On the firſt event I lay eighty-one to fifty-four; on the ſecond I lay one hundred and thirty-five to ninety; on the third I lay two hundred and twenty-five to one hundred and fifty; and on the fourth I lay three hundred and ſeventy-five to two hundred and fifty: here I get $54+90+150+250=544$, which pays.

What are the odds againſt your loſing them all? $\frac{2}{5}\times\frac{2}{5}\times\frac{2}{5}\times\frac{2}{5}=\frac{16}{625}$: $625-16=609$ to 16, the anſwer.

PROOF.

On the firſt event I take twenty-four to ſixteen; on the ſecond I take ſixty to forty; on third I take one hundred and fifty to one hundred; and on the fourth I take three hundred and ſeventy-five to two hundred and fifty: here I get $24+60+150+375=609$, which pays.

What are the odds againſt your winning four ſucceſſive events, where it is two to one in your favour on each? $\frac{2}{3}\times\frac{2}{3}\times\frac{2}{3}+\frac{2}{3}=\frac{16}{81}$: $81-16=65$ to 16, the anſwer; which is $\frac{1}{16}$ better than 4 to 1.

PROOF.

On the firſt event I lay ſixteen to eight; on the ſecond I lay twenty-four to twelve; on the third I lay thirty-ſix to eighteen; and on the fourth I lay fifty-four to twenty-ſeven: here I get $8+12+18+27=65$, which pays.

What are the odds againſt your loſing the four? $\frac{1}{3}\times\frac{1}{3}\times\frac{1}{3}\times\frac{1}{3}=\frac{1}{81}$: $81-7=80$ to 1, the anſwer.

PROOF.

On the firſt event I take two to one; on the ſecond I take ſix to three; on the third I take eighteen to nine; and on the fourth I take fifty-four to twenty-ſeven: here I get $2+6+18+54=80$, which pays.

What are the odds againſt your winning two only out of the four?

The anſwer to this is taken or inveſtigated from the fourth power of $a+b$, wherein a is made equal to 2, and b equal to 1, which is 57 to 24 againſt you.

There are ſix different changes or forms for this to come off in your favour.

PROOF IN THE FIRST FORM.

On the firſt event I take 12 to 6;	18	you win.
On the ſecond I take 18 to 9;	9	you win.
On the third I take 18 to 9;	27	you loſe.
On the fourth I take 54 to 27;	81	you loſe.

In this I get $18+54-6-9=57$, which pays.

IN THE SECOND.

On the firſt event I take 12 to 6;	18	you win.
On the ſecond I take 18 to 9;	36	you loſe.
On the third I take 18 to 9;	54	you loſe.
On the fourth I lay 54 to 27;	81	you win.

In this form I get $18+18+27-6=57$, which pays.

IN THE THIRD.

On the firſt event I take 12 to 6; 18 you win.
On the ſecond I take 18 to 9; 36 you loſe.
On the third I take 18 to 9; 27 you win.
On the fourth I take 54 to 27; 81 you loſe.

In this I get $18\times 54-6-9=57$, which pays.

IN THE FOURTH.

On the firſt event I take 12 to 6; 36 you loſe.
On the ſecond I ſtand neuter; 36 you loſe.
On the third I lay 36 to 18; 54 you win.
On the fourth I lay 54 to 27; 81 you win.

In this I get $12+18+27=57$, which pays.

IN THE FIFTH.

On the firſt event I take 12 to 6; 36 you loſe.
On the ſecond I ſtand neuter; 36 you win.
On the third I take 18 to 9; 27 you win.
On the fourth I take 54 to 27; 81 you loſe.

In this I get $12+54-9=57$, which pays.

IN THE SIXTH.

On the firſt event I take 12 to 6; 36 you loſe.
On the ſecond I ſtand neuter; 36 you win.
On the third I take 18 to 9; 54 you loſe.
On the fourth I lay 54 to 27; 81 you win.

In this I get $12+18+27=57$, which pays.

What are the odds againſt your winning three events only out of the four, it being two to one in your favour?

The ſolution of this is found by raiſing $a+b$, to the fourth power as before; and is 49 to 32 againſt you, and admits of no more than four changes or forms.

IN THE FIRST FORM.

On the firſt event I lay 8 to 4; 36 you win.
On the ſecond I ſtand neuter; 36 you win.
On the third I take 18 to 9; 27 you win.
On the fourth I take 54 to 27; 81 you loſe.

In this form I get $4+54-9=49$, which pays.

IN THE SECOND.

On the firſt event I lay 8 to 4; 36 you win.
On the ſecond neuter; 36 you win.

On the third I take 18 to 9; 54 you loſe.
On the fourth I lay 54 to 27; 81 you win.

In this form I get $4+18+27=49$, which pays.

IN THE THIRD.

On the firſt event I lay 8 to 4; 36 you win.
On the the ſecond neuter; 36 you loſe.
On the third I lay 36 to 18; 54 you win.
On the fourth I lay 54 to 27; 81 you win.

In this form I get $4+18+27=49$, which pays.

IN THE THIRD.

On the firſt event I lay 8 to 4; 24 you loſe.
On the ſecond I lay 24 to 12; 36 you win.
On the third I lay 36 to 18; 54 you win.
On the fourth I lay 54 to 27; 81 you win.

In this form I get $12+18+27-8=49$, which pays.

What are the odds againſt your loſing three only out of the four?

The anſwer to this is found in the ſame power as the former, and is 73 to 8; and admits of four changes or forms.

PROOF IN THE FIRST FORM.

On the firſt event I take 10 to 5; 3 you win.
On the ſecond I take 6 to 3; 9 you loſe.
On the third I take 18 to 9; 27 you loſe.
On the fourth I take 54 to 27; 81 you loſe.

In this form I get $6+18+54-5=73$, which pays.

IN THE SECOND.

On the firſt event I take 10 to 5; 18 you loſe.
On the ſecond I take 18 to 9; 36 you loſe.
On the third I take 18 to 9; 27 you win.
On the fourth I take 54 to 27; 81 you loſe.

In this form I get $10+18+54-9=73$, which pays.

IN THE THIRD.

On the firſt event I take 10 to 5; 18 you loſe.
On the ſecond I take 18 to 9; 9 you win.
On the third I take 18 to 9; 27 you loſe.
On the fourth I take 54 to 27; 81 you loſe.

In this form I get $10+18+54-9=73$, which pays.

IN THE FOURTH.

On the firſt event I take 10 to 5; 18 you loſe.
On the ſecond I take 18 to 9; 36 you loſe.

On the third I take 18 to 9;	54 you loſe.
On the fourth I lay 54 to 27;	81 you win.

In this form I get 10+18+18+27=73, pays.

It may be thought unneceſſary to give any more caſes, or any more events than four; for by a due attention to the inſtructions already laid down, you may go to any number of events.

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INSTRUCTIONS,

How to lay your money round againſt any field, ſo as to be neither a winner nor a loſer; and when capable of doing ſo, you may lay your bets to advantage as they offer.

SUPPOSE there is a field of three horſes, and that they are equal favourites; conſequently the odds are two to one againſt each horſe. viz.

20 to 10 againſt A,
20 to 10 againſt B,
20 to 10 againſt C,

In this example you ſee that the agregate ſum againſt each horſe is equal to thirty; and let which will win, he that lays againſt each, or as the technical term is, he that lays his money round, neither wins nor loſes.

Suppoſe you meet with a gentleman who may take ſix to four; you muſt then be particular in the ſum which you are to lay the odds to, ſo that the ſum of your money and his may correſpond with the agregate ſum thirty: therefore, let the money which you are to lay the odds to, be twelve, and to that you are to lay eighteen; which agrees with the agregate ſum. In this caſe you will be ſure to be a gainer of two guineas, let which will win: as appears in the following example:

18 to 12 againſt A,
20 to 10 againſt B,
20 to 10 againſt C.

If A wins, you receive $10+10=20$, to pay 18.

If B wins you receive $12+10=22$, to pay 20.

If C wins, you receive $12+10=22$, to pay 20.

On a field of three horſes, viz. A, B, and C, even betting againſt A, two to one againſt B, what are the odds againſt C, and to lay your money round, ſo as neither to win nor loſe?

15 to 5 againſt A,
20 to 10 againſt B, 30 is the aggregate ſum.
25 to 5 againſt C, the anſwer; which is five to one, and is found by the ſum which you lay the odds to of B and C agreeing or correſponding with the money laid againſt the favourite A; fifteen being the ſum laid againſt A, and ten the money which you laid the odds to againſt B, conſequently there is five wanting to make it equal to fifteen: five being the ſum which you are to lay the odds to againſt C, that odds muſt be twenty-five, to make it equal to thirty, the aggregate ſum.

There is another method of finding the odds againſt C, which is, by addition of vulgar fractions, thus, $\overset{A,}{\frac{1}{2}}+\overset{B,}{\frac{1}{3}}=\frac{5}{6}$: 6—5=5 to 1 againſt C, as before.

A due attention given to the two former caſes, and clearly underſtood, will enable you to lay your money to the beſt advantage againſt any field whatſoever: notwithſtanding which, I will give you a few more examples.

On a field of three horſes, viz. A, B, and C, five to four on A, and two to one againſt B, what are the odds againſt C?

$$\left.\begin{array}{l}\text{40 to 50 againſt A,}\\ \text{60 to 30 againſt B,}\end{array}\right\}\text{90 the aggregate ſum.}$$

80 to 10 againſt C, or 8 to 1, the anſwer.

If A wins, I loſe 40, and get $30+10=40$, againſt B and C.

If B wins, I loſe 60, and get $50+10=60$, againſt A and C.

If C wins, I loſe 80, and get $50+30=80$, againſt A and B.

On a field of four horſes, where it is ſix to four againſt A, two to one againſt B, and four to one againſt C, what are the odds againſt D?

$$\left.\begin{array}{l}\text{90 to 60 againſt A,}\\ \text{100 to 50 againſt B,}\\ \text{120 to 30 againſt C,}\end{array}\right\}\text{150 the aggregate ſum.}$$

140 to 10 againſt D, or 14 to 1, the anſwer.

On a field of five horſes, where it is two to one againſt A, three to one againſt B, four to one againſt C, and five to one againſt D, what are the odds againſt E?

200 to 100 againſt A,
225 to 75 againſt B,
240 to 60 againſt C,
250 to 50 againſt D,
285 to 15 againſt E, or 19 to 1, the anſwer
300 the aggregate ſum.

On a field of ſix horſes, where it is five to two againſt the favourite A, four to one againſt B, four to one againſt C, ſix to one againſt D, and nine to one againſt E, what are the ods againſt F?

250 to 100 againſt A,
280 to 70 againſt B,
280 to 70 againſt C,
300 to 50 againſt D,
315 to 35 againſt E,
350 the agregrate ſum.
325 to 25 againſt F, 13 to 1, the anſwer.

On a field of ſeven horſes, where it is three to one againſt A, three to one againſt B, four to one againſt C, five to one againſt D, eleven to one againſt E, twenty-nine to one againſt F, what are the odds againſt G?

450 to 150 againſt A,
450 to 150 againſt B,
480 to 120 againſt C,
500 to 100 againſt D,
550 to 50 againſt E,
580 to 20 againſt F,
600 the aggregate ſum.
590 to 10 againſt G, 59 to 1, the anſwer.

On a field of nine horſes, where it is three to one againſt A, four to one againſt B, ſeven one-eighth to one againſt C, nine to one againſt D, what are your different ſums to all the reſt, ſo as to be a gainer of ten guineas, let which will win?

195 to 65 againſt A,
208 to 52 againſt B,
228 to 32 againſt C,
234 to 26 againſt D,
236 to 24 againſt E,
238 to 22 againſt F,
240 to 20 againſt G,
242 to 18 againſt H,
249 to 11 againſt I,

260, the aggregate ſum.

In this you are gainer of ten guineas, let which will win.

On the ſame field, ſo as to be neither a winner nor a loſer, an accurate anſwer is required.

195 to 65 againſt A,
208 to 52 againſt B,
228 to 32 againſt C,
234 to 26 againſt D,
236 to 24 againſt E,
240 to 20 againſt F,
242 to 18 againſt G,
245 to 15 againſt H,

260 the aggregate ſum,

252 to 8 againſt I, the anſwer required.

A due obſervance of theſe two laſt tables, with the rules already given, will be a ſufficient government for you to lay your money to the beſt advantage.

It often happens, that on a large field you cannot lay againſt more than two or three horſes; and in theſe caſes you are obliged to ſtand your money: however, I have ſought out a method to get over that, which is, by backing theſe againſt the field which you have already laid againſt. Suppoſe on a field of ſix, ſeven, or more horſes, that you had laid fifty to twenty againſt the favourite A, ſixty to ten againſt B, and that you could not lay againſt any more; in this ſituation how are you to bet upon A and B againſt all the reſt? Suppoſe this field was to run for a purſe of ſeventy guineas, A would be intitled to $\frac{2}{7}$ of it, and B to $\frac{1}{7}$; ſo that A and B would be intitled to $20+10=30$ of the 70 guineas: therefore, it is forty on the field to thirty againſt A and B. So that to ſecure yourſelf, you are to lay thirty to forty A and B againſt the field. Suppoſe A wins, you loſe fifty; and to pay that fifty, you get ten againſt B, and forty on A and B againſt the field. Suppoſe B wins, you loſe ſixty; and to pay that, you get twenty againſt A, and forty againſt the field. Suppoſe neither A nor B had won, you would then have loſt thirty againſt the field; and to pay that, you won twenty againſt A, and ten againſt B.

If the reader is not already acquainted with vulgar fractions, and has an inclination to avail himſelf of this and the following theorem, I here lay down the proper method of finding the odds of A, B, and the field, $\frac{2}{7}+\frac{1}{7}=14+7=\frac{25}{49}$: $49-21=28$, which ſhews it to be twenty-eight to twenty-one, or reduced, is four to three on the field againſt A, and B.

As it is neceſſary that you ſhould be well verſed in the addition of vulgar fractions, I will here give you a ſmall ſketch. In addition, you are firſt to reduce the numerators into a new numerator, by multiplying each numerator into every denominator but its own, for a new numerator, and all the denominators together for a common denominator; then add all the numerators together for a joint numerator; as you will ſee hereafter, and has already been done in this caſe, on two events only, where A and B's ſhare were concerned in the purſe of ſeventy guineas: however, if you find that theſe inſtructions are not ſufficient, I would recommend you to Dilworth's Arithmetic, or any other book in which vulgar fractions are elucidated.

On a field where you have laid two to one againſt A, and four to one againſt B, what are the odds between A, B, and the field? $\frac{1}{3}+\frac{1}{5}=\frac{5+3=8,}{15}$ the anſwer, which is 8 to 7 on A and B, againſt the field, and is proved as under:

$$\left.\begin{array}{l}\text{40 to 20 againſt A,}\\ \text{48 to 12 againſt B,}\end{array}\right\}\text{60 the aggregate ſum.}$$

32 to 28 on A, B, againſt the field, the anſwer, as before: which may be likewiſe found by adding a ſum to twelve, the (money laid againſt B) which will make it equal to forty, (that being the ſum laid againſt A) which is twenty-eight; and to find what you are to lay againſt the twenty-eight, is found by adding the ſum thirty-two to it, which makes ſixty, the aggregate ſum.

On a field where you laid two to one againſt A, five to one againſt B, and ſeven to one againſt D, what are the odds between A, B, C, and the field? $\frac{1}{3}+\frac{1}{6}+\frac{1}{8}=\underset{144}{\underline{48+24+18=90:}}$ the anſwer is 90 to 54, on A, B, C, againſt the field; and is proved in the following table, where the anſwer is equally found.

$$\left.\begin{array}{l}\text{96 to 48 againſt A,}\\ \text{120 to 24 againſt B,}\\ \text{126 to 18 againſt C,}\end{array}\right\}\text{144 the aggregate ſum,}$$

90 to 54 on A, B, C, againſt the field, as before.

Suppoſe you could have laid eighty-four to ſixty againſt the field, you would then be a gainer of ſix, let which would have won.

On a field where it is three to one againſt A, four to one againſt B, ſix to one againſt C, and ſix to one againſt D, what are the odds between them and the field? $\frac{1}{4}+\frac{1}{5}+\frac{1}{7}+\frac{1}{7}=\underset{980}{\underline{245+196+140+140}}=721$ to 259 the anſwer.

$$\left.\begin{array}{l}\text{735 to 245 againſt A,}\\ \text{784 to 196 againſt B,}\\ \text{840 to 140 againſt C,}\\ \text{840 to 140 againſt D,}\end{array}\right\}\text{980 the aggregate ſum,}$$

721 to 259 agſt the field, or $2\frac{203}{259}$ to 1, the proof.

There is a caſe which I have often ſeen, though I never ſaw the accurate odds laid; and that is, the odds between two neither win no bet.

I here lay down the method of finding the exact odds, with inſtructions how to hedge to the ſame, which ſtands as a proof to the fractional operation.

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BETWEEN TWO ON A FIELD.

SUPPOSE in a field where it is two to one againſt A, and five to two againſt B, what are the odds between the two neither win no bet; the odds between them two and the field; likewiſe how to hedge to the different bets, ſo as to neither win nor loſe?

$\frac{1}{3}+\frac{2}{7}=\frac{7+6=13}{21}$; the two new numerators ſhew it to be 7 to 6 in favour of A againſt B, and the addition ſhews it to be 13 to 8 A, B, againſt the field.

7 to 6 on A, againſt B, neither win.

13 to 8 on A, B, againſt the field.

18 to 9 againſt A.
10 to 4 againſt B.

In this table the foregoing two ſolutions are proved; for, if A ſhould win, you loſe 18 to 9 againſt him, and win $6+8+4=18$, which pays: if B ſhould win, you loſe $7+10=17$, and win $8+9=17$, which pays: if the field ſhould win, you loſe 13, and win $9+4=13$, which pays. You are to obſerve that the ſum of the different ſums which you lay againſt A and B, is equal to the money which you laid againſt the field; for if neither A nor B ſhould win, the money which you win againſt them pays the field, the bet between A and B then being void.

Suppoſe it to be two to one againſt A, and three to one againſt B, what are the different odds, as before?

$\frac{1}{3}+\frac{1}{4}=\frac{4+3=7}{12}$: the odds on A agſt B, 4 to 3, and are 7 to 5 on A, B, againſt the field.

PROOF.

4 to 3 on A, againſt B, neither win.
7 to 5 on A, B, againſt the field.
10 to 5 againſt A.
6 to 2 againſt B.

PROOF EXPLAINED.

If A ſhould win, you loſe 10, and win $3+5+2=10$.

If B ſhould win, you loſe $6+4=10$, and win $5+5=10$.

If the field ſhould win, you loſe 7, and win $5+2=7$.

Suppoſe it to be two to one againſt A, and four to one againſt B, what are the odds between the two, neither win; likewiſe the odds between them and the field?

$\frac{1}{3}+\frac{1}{5}=\frac{5+3=8}{15}$: the odds on A againſt B are 5 to 3, and 8 to 7 on A, B, againſt the field.

5 to 3 on A, againſt B, neither win.
8 to 7 on A, B, againſt the field.
12 to 6 againſt A.
8 to 2 againſt B.

PROOF EXPLAINED.

If A wins, you loſe 12, and get $3+7+2=12$.

If B wins, you loſe $8+5=13$, and get $7+6=13$.

If neither win, you loſe 8, and get $6+2=8$.

Suppoſe it to be two to one againſt A, and ſix to one againſt B, what are the different odds as before? $\frac{1}{3}+\frac{1}{7}=\frac{7+3=10}{21}$: the odds on A againſt B are ſeven to three; and are eleven to ten on the field againſt A and B.

PROOF.

7 to 3 on A againſt B, neither win.
10 to 11 on A, B, againſt the field.
16 to 8 againſt A.
12 to 2 againſt B.

Suppoſe it to be five to two againſt A, and three to one againſt B, what are the different odds as before? $\frac{2}{7}+\frac{1}{4}=\frac{8+7=15}{28}$: it is eight to ſeven on A againſt B; and it is fifteen to thirteen on A, B, againſt the field.

PROOF.

8 to 7 on A againſt B, neither win.
15 to 13 A, B, againſt the field.
25 to 10 againſt A,
15 to 5 againſt B.

Suppoſe it to be ſeven to four againſt A, and ſeven to two againſt B, what are the odds as before? $\frac{4}{11}+\frac{2}{9}=\frac{36+22=58}{99}$: It is thirty-ſix to twenty-two on A againſt B; and fifty-eight to forty-one, on A, B, againſt the field.

PROOF.

36 to 22 on A againſt B, neither win.
58 to 41 on A, B, againſt the field.
77 to 44 againſt A.
49 to 14 againſt B.

In the following Tables, you have all the different odds that are on all the different changes of two and three events; from ſix to one for you, to ſix to one againſt you: they are ſo preciſely and conſpicuouſly laid down, that, at a curſory view, you may find the accurate odds ſought for.

Two Events, both in your favour.				1ſt Col. That you do win both.	2d. That you do not loſe both.	3d. That you do not win the firſt, and loſe the ſecond.	4th. That you do not loſe the firſt, and win the ſecond.
6 *to* 1		6 *to* 1		36 *to* 13	48 *to* 1	43 *to* 6	43 *to* 6
6 *to* 1		5 *to* 1		30 *to* 12	41 *to* 1	6 *to* 1	37 *to* 5
6 *to* 1		4 *to* 1		24 *to* 11	34 *to* 1	29 *to* 6	31 *to* 4
6 *to* 1		7 *to* 2		2 *to* 1	61 *to* 2	51 *to* 12	8 *to* 1
6 *to* 1		3 *to* 1		9 *to* 5	27 *to* 1	11 *to* 3	25 *to* 3
6 *to* 1		5 *to* 2		30 *to* 19	47 *to* 2	37 *to* 12	44 *to* 5
6 *to* 1		2 *to* 1		4 *to* 3	20 *to* 1	15 *to* 6	19 *to* 2
6 *to* 1		7 *to* 4		6 *to* 5	73 *to* 4	53 *to* 24	10 *to* 1
6 *to* 1		3 *to* 2		18 *to* 17	33 *to* 2	23 *to* 12	32 *to* 3
6 *to* 1		5 *to* 4		10 *to* 11	59 *to* 4	39 *to* 24	58 *to* 5
6 *to* 1		*even*		3 *to* 4	13 *to* 1	4 *to* 3	13 *to* 1
5 *to* 1		5 *to* 1		25 *to* 11	35 *to* 1	31 *to* 5	31 *to* 5
5 *to* 1		4 *to* 1		2 *to* 1	29 *to* 1	5 *to* 1	26 *to* 4
5 *to* 1		7 *to* 2		35 *to* 19	26 *to* 1	44 *to* 10	47 *to* 7
5 *to* 1		3 *to* 1		15 *to* 9	23 *to* 1	19 *to* 5	7 *to* 1
5 *to* 1	AND	5 *to* 2	ARE	25 *to* 17	20 *to* 1	32 *to* 10	37 *to* 5
5 *to* 1		2 *to* 1		5 *to* 4	17 *to* 1	13 *to* 5	8 *to* 1
5 *to* 1		7 *to* 4		35 *to* 1	62 *to* 4	46 *to* 20	59 *to* 7
5 *to* 1		3 *to* 2		*even*	14 *to* 1	2 *to* 1	9 *to* 1
5 *to* 1		5 *to* 4		25 *to* 29	50 *to* 4	17 *to* 10	49 *to* 5
5 *to* 1		*even*		5 *to* 7	11 *to* 1	7 *to* 5	11 *to* 1
4 *to* 1		4 *to* 1		16 *to* 9	24 *to* 1	21 *to* 4	21 *to* 4
4 *to* 1		7 *to* 2		28 *to* 17	43 *to* 2	37 *to* 8	38 *to* 7
4 *to* 1		3 *to* 1		3 *to* 2	19 *to* 1	4 *to* 1	17 *to* 3
4 *to* 1		5 *to* 2		4 *to* 3	33 *to* 2	27 *to* 8	6 *to* 1
4 *to* 1		2 *to* 1		8 *to* 7	14 *to* 1	11 *to* 4	13 *to* 2
4 *to* 1		7 *to* 4		28 *to* 27	51 *to* 4	39 *to* 16	48 *to* 7
4 *to* 1		3 *to* 2		12 *to* 13	23 *to* 2	17 *to* 8	22 *to* 3
4 *to* 1		5 *to* 4		4 *to* 5	41 *to* 4	29 *to* 16	8 *to* 1
4 *to* 1		*even*		2 *to* 3	9 *to* 1	3 *to* 2	9 *to* 1
3 *to* 1		3 *to* 1		9 *to* 7	15 *to* 1	13 *to* 3	13 *to* 3
3 *to* 1		5 *to* 2		15 *to* 13	13 *to* 1	22 *to* 6	23 *to* 5
3 *to* 1		2 *to* 1		*even*	11 *to* 1	3 *to* 1	5 *to* 1
3 *to* 1		7 *to* 4		21 *to* 23	10 *to* 1	16 *to* 6	37 *to* 7

Two Events, both in your favour.				1ſt Col. That you do win both.	2d. That you do win both.	3d. That you do not win the firſt, and loſe the ſecond.	4th. That you do n ot loſe the firſt, and win the ſecond.
3 *to* 1		3 *to* 2		9 *to* 11	9 *to* 1	7 *to* 3	17 *to* 3
3 *to* 1		5 *to* 4		15 *to* 21	8 *to* 1	2 *to* 1	31 *to* 5
3 *to* 1		*even*		3 *to* 5	7 *to* 1	5 *to* 3	7 *to* 1
5 *to* 2		5 *to* 2		25 *to* 24	45 *to* 4	39 *to* 10	39 *to* 10
5 *to* 2		2 *to* 1		10 *to* 11	19 *to* 2	16 *to* 5	17 *to* 4
5 *to* 2		7 *to* 4		5 *to* 6	69 *to* 8	57 *to* 20	63 *to* 14
5 *to* 2		3 *to* 2		3 *to* 4	31 *to* 4	5 *to* 2	29 *to* 6
5 *to* 2		5 *to* 4		25 *to* 38	55 *to* 8	43 *to* 20	53 *to* 10
5 *to* 2		*even*		5 *to* 9	6 *to* 1	9 *to* 5	6 *to* 1
2 *to* 1		2 *to* 1		4 *to* 5	8 *to* 1	7 *to* 2	7 *to* 2
2 *to* 1	AND	7 *to* 4	ARE	14 *to* 19	29 *to* 4	25 *to* 8	28 *to* 7
2 *to* 1		3 *to* 2		2 *to* 3	13 *to* 2	11 *to* 4	4 *to* 1
2 *to* 1		5 *to* 4		10 *to* 17	23 *to* 4	19 *to* 8	22 *to* 5
2 *to* 1		*even*		1 *to* 2	5 *to* 1	2 *to* 1	5 *to* 1
7 *to* 4		7 *to* 4		49 *to* 72	105 *to* 16	93 *to* 28	93 *to* 28
7 *to* 4		3 *to* 2		21 *io* 34	47 *to* 8	41 *to* 14	43 *to* 12
7 *to* 4		5 *to* 4		35 *to* 64	83 *to* 16	71 *to* 28	79 *to* 20
7 *to* 4		*even*		7 *to* 15	9 *to* 2	15 *to* 7	9 *to* 2
3 *to* 2		3 *to* 2		9 *to* 16	21 *to* 4	19 *to* 6	19 *to* 6
3 *to* 2		5 *to* 4		1 *to* 2	37 *to* 8	33 *to* 12	7 *to* 2
3 *to* 2		*even*		3 *to* 7	4 *to* 1	7 *to* 3	4 *to* 1
5 *to* 4		5 *to* 4		25 *to* 56	65 *to* 16	61 *to* 20	61 *to* 20
5 *to* 4		*even*		5 *to* 13	7 *to* 2	13 *to* 5	7 *to* 2
even		*even*		1 *to* 3	3 *to* 1	3 *to* 1	3 *to* 1

An explanation to the foregoing tables on two events, wherein you have 232 changes, from ſix to one for you, to ſix to one againſt you, according to the current odds on each event.

In the firſt line, you begin with ſix to one, both for you in the firſt column; in the ſecond, it is ſix to one againſt you on each; in the third, it is ſix to one for you, and ſix to one againſt you; and, in the fourth, the ſame though reverſed.

Suppoſe you have two events where it is ſix to one, and three to one both for you; look for ſix to one and three to one, and you will find it to be, in the firſt column, 9 to 5 that you win both; in the ſecond column, it is twenty-ſeven to one againſt your loſing both, which is equally the ſame as if it had been ſix to one and three to one both againſt you, and that you did not win both; in the third column, it is eleven to three that you do not win the firſt and loſe the ſecond, which is equally the ſame as if it had been ſix to one for you and three to one againſt you, and that you did not win both; and, in the fourth column, it is twenty-five to three that you do not loſe the firſt and win the ſecond, which is the ſame as if it was ſix to one againſt you on the firſt, and three to one for you on the ſecond.

The following Tables on Three Events, from ſix to one for you, to ſix to one againſt you, which admit of one thouſand ſeven hundred and ſixty different changes or forms in their coming off, are regularly ranged; with the accurate odds to every change or form of each, and meaſured as low as either the intigers or fractions would admit, (the firſt column, where the odds are againſt your winning them all, excepted.)

THREE EVENTS, all in your favour.								1ſt. Againſt your winning them all.		2d. Againſt your loſing all.		3d. Againſt your winning the firſt, and loſing the ſecond and third.	
6 *to*	1	6 *to*	1		6 *to*	1		127 *to*	216	342 *to*	1	$56\frac{1}{6}$ *to*	1
6	1	6	1		5	1		19	30	293	1	48	1
6	1	6	1		4	1		101	144	244	1	$39\frac{5}{6}$	1
6	1	6	1		3	1		22	27	195	1	$31\frac{2}{3}$	1
6	1	6	1		5	2		163	180	341	2	$27\frac{7}{12}$	1
6	1	6	1		2	1		75	72	146	1	$23\frac{1}{2}$	1
6	1	6	1		7	4		287	252	$133\frac{3}{4}$	1	$21\frac{11}{24}$	1
6	1	6	1		3	2		137	108	$121\frac{1}{2}$	1	$19\frac{5}{12}$	1
6	1	6	1		5	4		87	60	$109\frac{1}{4}$	1	$17\frac{9}{24}$	1
6	1	6	1		*even*			31	18	97	1	$15\frac{1}{3}$	1
6	1	5	1		5 *to*	1		17	25	251	1	41	1
6	1	5	1		4	1		3	4	209	1	34	1
6	1	5	1		3	1		13	15	167	1	27	1
6	1	5	1		5	2		24	25	146	1	$23\frac{1}{2}$	1
6	1	5	1		2	1		11	10	125	1	20	1
6	1	5	1	AND	7	4	ARE	6	5	$114\frac{1}{2}$	1	$18\frac{1}{4}$	1
6	1	5	1		3	2		4	3	104	1	$16\frac{1}{2}$	1
6	1	5	1		5	4		38	25	$93\frac{1}{2}$	1	$14\frac{3}{4}$	1
6	1	5	1		*even*			9	5	83	1	13	1
6	1	4	1		4 *to*	1		79	96	174	1	$28\frac{1}{6}$	1
6	1	4	1		3	1		17	18	139	1	$22\frac{1}{3}$	1
6	1	4	1		5	2		25	24	$121\frac{1}{2}$	1	$19\frac{5}{12}$	1
6	1	4	1		2	1		19	16	104	1	$16\frac{1}{2}$	1
6	1	4	1		7	4		31	24	$95\frac{1}{4}$	1	$15\frac{1}{24}$	1
6	1	4	1		3	2		103	72	$86\frac{1}{2}$	1	$13\frac{7}{12}$	1
6	1	4	1		5	4		13	8	$77\frac{3}{4}$	1	$12\frac{1}{8}$	1
6	1	4	1		*even*			23	12	69	1	$10\frac{2}{3}$	1
6	1	3	1		3 *to*	1		29	27	111	1	$17\frac{2}{3}$	1
6	1	3	1		5	2		53	45	97	1	$15\frac{1}{3}$	1
6	1	3	1		2	1		4	3	83	1	13	1
6	1	3	1		7	4		13	9	76	1	$11\frac{5}{6}$	1
6	1	3	1		3	2		43	27	69	1	$10\frac{2}{3}$	1
6	1	3	1		5	4		9	5	62	1	$9\frac{1}{2}$	1
6	1	3	1		*even*			19	9	55	1	$8\frac{1}{2}$	1

4th. Againſt your winning the firſt and ſecond, and loſing the third.		5th. Againſt your loſing the firſt, and winning the ſecond and third.		6th. Againſt your loſing the firſt and ſecond, and winning the third.		7th. Againſt your winning the firſt and third, and loſing the ſecond.		8th. Againſt your loſing the firſt and third, and winning the ſecond.	
$8\frac{19}{36}$ *to*	1	$8\frac{19}{36}$ *to*	1	$56\frac{1}{6}$ *to*	1	$8\frac{19}{36}$ *to*	1	$56\frac{1}{6}$ *to*	1
$7\frac{1}{6}$	1	$8\frac{4}{5}$	1	$57\frac{4}{5}$	1	$8\frac{4}{5}$	1	48	1
$5\frac{29}{36}$	1	$9\frac{5}{24}$	1	$60\frac{1}{4}$	1	$9\frac{5}{24}$	1	$39\frac{5}{6}$	1
$4\frac{4}{9}$	1	$9\frac{8}{9}$	1	$64\frac{1}{3}$	1	$9\frac{8}{9}$	1	$31\frac{2}{3}$	1
$3\frac{55}{72}$	1	$10\frac{13}{36}$	1	$67\frac{3}{5}$	1	$10\frac{13}{36}$	1	$27\frac{7}{12}$	1
$3\frac{1}{12}$	1	$11\frac{1}{4}$	1	$72\frac{1}{2}$	1	$11\frac{1}{4}$	1	$23\frac{1}{2}$	1
$2\frac{107}{144}$	1	$11\frac{5}{6}$	1	76	1	$11\frac{5}{6}$	1	$21\frac{11}{24}$	1
$2\frac{29}{72}$	1	$12\frac{11}{18}$	1	$80\frac{2}{3}$	1	$12\frac{11}{18}$	1	$19\frac{5}{18}$	1
$2\frac{1}{16}$	1	$13\frac{21}{30}$	1	$87\frac{1}{5}$	1	$13\frac{21}{30}$	1	$17\frac{9}{24}$	1
31	18	$15\frac{1}{3}$	1	97	1	$15\frac{1}{3}$	1	$15\frac{1}{3}$	1
$7\frac{2}{5}$	1	$9\frac{2}{25}$	1	$49\frac{2}{5}$	1	$7\frac{2}{5}$	1	$49\frac{2}{5}$	1
6	1	$9\frac{1}{2}$	1	$51\frac{1}{2}$	1	$7\frac{3}{4}$	1	41	1
$4\frac{3}{5}$	1	$10\frac{1}{5}$	1	55	1	$8\frac{1}{3}$	1	$32\frac{3}{5}$	1
$3\frac{9}{10}$	1	$10\frac{19}{25}$	1	$57\frac{4}{5}$	1	$8\frac{4}{5}$	1	$28\frac{2}{5}$	1
$3\frac{1}{5}$	1	$11\frac{3}{5}$	1	62	1	$9\frac{1}{2}$	1	$24\frac{1}{5}$	1
$2\frac{17}{20}$	1	$12\frac{1}{5}$	1	65	1	10	1	$22\frac{1}{10}$	1
5	2	13	1	69	1	$10\frac{2}{3}$	1	20	1
$2\frac{3}{20}$	1	$14\frac{3}{25}$	1	$74\frac{3}{5}$	1	11 [illegible]	1	$17\frac{9}{10}$	1
9	5	$15\frac{4}{5}$	1	83	1	13	1	$15\frac{4}{5}$	1
$6\frac{7}{24}$	1	$9\frac{15}{16}$	1	$42\frac{3}{4}$	1	$6\frac{7}{24}$	1	$43\frac{3}{4}$	1
$4\frac{5}{6}$	1	$10\frac{2}{3}$	1	$45\frac{2}{3}$	1	$6\frac{2}{9}$	1	34	1
$4\frac{5}{48}$	1	$11\frac{1}{4}$	1	48	1	$7\frac{1}{6}$	1	$29\frac{5}{9}$	1
$3\frac{9}{24}$	1	$12\frac{1}{8}$	1	$51\frac{1}{2}$	1	$7\frac{3}{4}$	1	$25\frac{1}{4}$	1
$3\frac{1}{96}$	1	$12\frac{3}{4}$	1	54	1	$8\frac{1}{6}$	1	$23\frac{1}{16}$	1
$2\frac{31}{48}$	1	$13\frac{7}{12}$	1	$57\frac{1}{3}$	1	$8\frac{13}{18}$	1	$20\frac{7}{8}$	1
$2\frac{9}{32}$	1	$14\frac{3}{4}$	1	62	1	$9\frac{1}{2}$	1	$18\frac{1}{16}$	1
23	12	$16\frac{1}{2}$	1	69	1	$10\frac{2}{3}$	1	$16\frac{1}{2}$	1
$5\frac{2}{9}$	1	$11\frac{4}{9}$	1	$36\frac{1}{3}$	1	$5\frac{2}{9}$	1	$36\frac{1}{3}$	1
$4\frac{4}{9}$	1	$12\frac{1}{15}$	1	$38\frac{1}{5}$	1	$5\frac{8}{15}$	1	$31\frac{2}{3}$	1
$3\frac{2}{3}$	1	13	1	41	1	6	1	27	1
$3\frac{5}{18}$	1	$13\frac{2}{3}$	1	43	1	$6\frac{1}{3}$	1	$24\frac{2}{3}$	1
$2\frac{8}{9}$	1	$14\frac{5}{9}$	1	$45\frac{2}{3}$	1	$6\frac{7}{9}$	1	$22\frac{1}{3}$	1
5	2	$15\frac{4}{5}$	1	$49\frac{2}{3}$	1	$7\frac{2}{5}$	1	20	1
$2\frac{1}{9}$	1	$17\frac{2}{3}$	1	55	1	$8\frac{1}{3}$	1	$17\frac{2}{3}$	1

THREE EVENTS, all in your favour.					1ſt Col. Againſt your winning them all.	2d. Againſt your loſing all.	3d. Againſt your winning the firſt, and loſing the ſecond and third.
6 *to* 1	5 *to* 2		5 *to* 2		193 *to* 150	84$\frac{3}{4}$ *to* 1	13$\frac{7}{24}$ *to* 1
6 1	5 2		2 1		29 20	27$\frac{1}{2}$ 1	11$\frac{1}{4}$ 1
6 1	5 2		7 4		329 210	66$\frac{3}{4}$ 1	10$\frac{11}{48}$ 1
6 1	5 2		3 2		31 18	60$\frac{1}{4}$ 1	9$\frac{[illegible]}{24}$ 1
6 1	5 2		5 4		291 150	54$\frac{1}{8}$ 1	8$\frac{3}{16}$ 1
6 1	5 2		*even*		34 15	48 1	7$\frac{1}{6}$ 1
6 1	2 1		2 *to* 1		39 24	62 1	9$\frac{1}{2}$ 1
6 1	2 1		7 4		7 4	56$\frac{1}{4}$ 1	8$\frac{5}{8}$ 1
6 1	2 1		3 2		23 12	51$\frac{1}{2}$ 1	7$\frac{3}{4}$ 1
6 1	2 1		5 4		129 60	46$\frac{1}{4}$ 1	6$\frac{7}{8}$ 1
6 1	2 1		*even*		5 2	41 1	6 1
6 1	7 4		7 *to* 4		79 42	51$\frac{15}{16}$ 1	7$\frac{79}{96}$ 1
6 1	7 4		3 2		2$\frac{1}{18}$ 1	47$\frac{1}{8}$ 1	7$\frac{1}{48}$ 1
6 1	7 4		5 4		23 10	42$\frac{5}{16}$ 1	6$\frac{7}{32}$ 1
6 1	7 4		*even*		8 3	37$\frac{1}{2}$ 1	5$\frac{5}{12}$ 1
6 1	3 2		3 *to* 2		2$\frac{13}{54}$ 1	42$\frac{3}{4}$ 1	6$\frac{7}{24}$ 1
6 1	3 2	AND	5 4	ARE	5 2	38$\frac{3}{8}$ 1	5$\frac{9}{16}$ 1
6 1	3 2		*even*		26 9	34 1	4$\frac{[illegible]}{6}$ 1
6 1	5 4		5 *to* 4		139 50	34$\frac{7}{16}$ 1	4$\frac{29}{32}$ 1
6 1	5 4		*even*		16 5	30$\frac{1}{2}$ 1	4$\frac{1}{4}$ 1
6 1	*even*		*even*		22 6	27 1	3$\frac{2}{3}$ 1
5 1	5 *to* 1		5 *to* 1		91 125	215 1	42$\frac{1}{5}$ 1
5 1	5 1		4 1		4 5	179 1	35 1
5 1	5 1		3 1		23 25	143 1	27$\frac{4}{5}$ 1
5 1	5 1		5 2		127 125	125 1	24$\frac{1}{5}$ 1
5 1	5 1		2 1		29 25	107 1	20$\frac{3}{5}$ 1
5 1	5 1		7 4		221 175	98 1	18$\frac{4}{5}$ 1
5 1	5 1		3 2		7 5	89 1	17 1
5 1	5 1		5 4		199 125	80 1	15$\frac{1}{5}$ 1
5 1	5 1		*even*		47 25	71 1	13$\frac{2}{5}$ 1
5 1	4 1		4 *to* 1		7 8	149 1	29 1
5 1	4 1		3 1		*even*	119 1	23 1
5 1	4 1		5 2		11 *to* 10	104 1	20 1
5 1	4 1		2 1		5 4	89 1	17 1

4th. Againſt your winning the firſt and ſecond, and loſing the third.		5th. Againſt your loſing the firſt, and winning the ſecond and third.		6th. Againſt your loſing the firſt and ſecond, and winning the third.		7th. Againſt your winning the firſt and third, and loſing the ſecond.		8th. Againſt your loſing the firſt and third, and winning the ſecond.	
$4\frac{43}{60}$ *to*	1	$12\frac{18}{25}$ *to*	1	$33\frac{3}{10}$ *to*	1	$4\frac{43}{60}$ *to*	1	$33\frac{3}{10}$ *to*	1
$3\frac{9}{10}$	1	$13\frac{7}{10}$	1	$35\frac{1}{4}$	1	$5\frac{1}{8}$	1	$28\frac{2}{5}$	1
$3\frac{59}{120}$	1	$14\frac{2}{5}$	1	$37\frac{1}{2}$	1	$5\frac{5}{12}$	1	$25\frac{19}{20}$	1
$3\frac{1}{12}$	1	$15\frac{1}{3}$	1	$39\frac{5}{6}$	1	$5\frac{29}{30}$	1	$23\frac{1}{2}$	1
$2\frac{27}{40}$	1	$16\frac{16}{25}$	1	$43\frac{1}{16}$	1	$6\frac{7}{20}$	1	$21\frac{1}{20}$	1
34	15	$18\frac{3}{5}$	1	48	1	$7\frac{1}{6}$	1	$18\frac{3}{5}$	1
$4\frac{1}{4}$	1	$14\frac{3}{4}$	1	$30\frac{1}{2}$	1	$4\frac{1}{4}$	1	$30\frac{1}{2}$	1
$3\frac{39}{48}$	1	$15\frac{1}{2}$	1	32	1	$4\frac{1}{2}$	1	$27\frac{7}{8}$	1
$3\frac{3}{8}$	1	$16\frac{1}{2}$	1	34	1	$4\frac{5}{6}$	1	$25\frac{1}{4}$	1
$2\frac{15}{16}$	1	$17\frac{9}{10}$	1	$36\frac{4}{5}$	1	$5\frac{9}{30}$	1	$22\frac{5}{8}$	1
5	2	20	1	41	1	6	1	20	1
$4\frac{1}{24}$	1	$16\frac{2}{7}$	1	$29\frac{1}{4}$	1	$4\frac{1}{24}$	1	$29\frac{1}{4}$	1
$3\frac{7}{12}$	1	$17\frac{1}{3}$	1	$31\frac{1}{12}$	1	$4\frac{25}{72}$	1	$26\frac{1}{2}$	1
$3\frac{1}{8}$	1	$18\frac{4}{5}$	1	$33\frac{1}{20}$	1	$4\frac{93}{120}$	1	$23\frac{3}{4}$	1
$2\frac{1}{3}$	1	21	1	$37\frac{1}{2}$	1	$5\frac{5}{12}$	1	21	1
$3\frac{31}{36}$	1	$18\frac{4}{9}$	1	$28\frac{1}{6}$	1	$3\frac{31}{36}$	1	$28\frac{1}{6}$	1
$3\frac{3}{8}$	1	20	1	$30\frac{1}{2}$	1	$4\frac{1}{4}$	1	$25\frac{1}{4}$	1
26	9	$22\frac{1}{3}$	1	34	1	$4\frac{5}{6}$	1	$22\frac{1}{3}$	1
$3\frac{29}{40}$	1	$21\frac{17}{25}$	1	$27\frac{7}{20}$	1	$3\frac{29}{40}$	1	$27\frac{7}{10}$	1
$3\frac{1}{5}$	1	$24\frac{1}{5}$	1	$30\frac{1}{2}$	1	$4\frac{1}{4}$	1	$24\frac{1}{5}$	1
$3\frac{2}{3}$	1	27	1	27	1	$3\frac{2}{3}$	1	27	1
$7\frac{16}{25}$	1	$7\frac{16}{25}$	1	$42\frac{1}{5}$	1	$7\frac{16}{25}$	1	$42\frac{1}{5}$	1
$6\frac{1}{5}$	1	8	1	44	1	8	1	35	1
$4\frac{19}{25}$	1	$8\frac{3}{5}$	1	47	1	$8\frac{3}{5}$	1	$27\frac{4}{5}$	1
$4\frac{1}{25}$	1	$9\frac{2}{25}$	1	$49\frac{2}{5}$	1	$9\frac{2}{25}$	1	$24\frac{1}{5}$	1
$3\frac{8}{25}$	1	$9\frac{4}{5}$	1	53	1	$9\frac{4}{5}$	1	$20\frac{3}{5}$	1
$2\frac{24}{25}$	1	$10\frac{11}{35}$	1	$55\frac{4}{7}$	1	$10\frac{11}{35}$	1	$18\frac{4}{5}$	1
$2\frac{3}{5}$	1	11	1	59	1	11	1	17	1
$2\frac{6}{25}$	1	$11\frac{24}{25}$	1	$63\frac{4}{5}$	1	$11\frac{24}{25}$	1	$15\frac{1}{5}$	1
47	25	$13\frac{2}{5}$	1	71	1	$13\frac{2}{5}$	1	$13\frac{2}{5}$	1
$6\frac{1}{2}$	1	$8\frac{3}{8}$	1	$36\frac{1}{2}$	1	$6\frac{1}{2}$	1	$36\frac{1}{2}$	1
5	1	9	1	29	1	7	1	29	1
4	1	$9\frac{1}{2}$	1	41	1	$7\frac{2}{5}$	1	$25\frac{1}{4}$	1
3	1	$10\frac{1}{4}$	1	44	1	$8\frac{3}{7}$	1	$21\frac{1}{2}$	1

THREE EVENTS, all in your favour.					1ſt Col. Againſt your winning them all.	2d. Againſt your loſing all.	3d. Againſt your winning the firſt, and loſing the ſecond and third.
5 to 1	4 to 1		7 to 4		19 to 14	81½ to 1	15½ to 1
5 1	4 1		3 2		3 2	74 1	14 1
5 1	4 1		5 4		17 10	66½ 1	12½ 1
5 1	4 1		even		2 1	59 1	11 1
5 1	3 1		3 to 1		51 45	95 1	18⅕ 1
5 1	3 1		5 2		31 25	83 1	15⅘ 1
5 1	3 1		2 1		7 5	71 1	13⅖ 1
5 1	3 1		7 4		159 105	65 1	12⅕ 1
5 1	3 1		3 2		5 3	59 1	11 1
5 1	3 1		5 4		47 25	53 1	9⅘ 1
5 1	3 1		even		11 5	47 1	8⅗ 1
5 1	5 2		5 to 2		169 125	72½ 1	13 7/10 1
5 1	5 2		2 1		38 25	62 1	11⅗ 1
5 1	5 2		7 4		41 25	56¾ 1	10 11/20 1
5 1	5 2		3 2		9 5	51½ 1	9½ 1
5 1	5 2	AND	5 4	ARE	253 125	46¼ 1	8 9/20 1
5 1	5 2		even		59 25	41 1	7⅖ 1
5 1	2 1		2 to 1		17 10	53 1	9⅘ 1
5 1	2 1		7 4		64 35	48½ 1	8 9/10 1
5 1	2 1		3 2		2 1	44 1	8 1
5 1	2 1		5 4		56 25	39½ 1	7 1/10 1
5 1	2 1		even		13 5	35 1	6⅕ 1
5 1	7 4		7 to 4		481 245	44⅜ 1	8 3/40 1
5 1	7 4		3 2		225 105	40¼ 1	7¼ 1
5 1	7 4		5 4		419 175	36⅛ 1	6 17/40 1
5 1	7 4		even		97 35	32 1	5⅗ 1
5 1	3 2		3 to 2		7 3	36½ 1	6½ 1
5 1	3 2		5 4		13 5	32¾ 1	5¾ 1
5 1	3 2		even		3 1	29 1	5 1
5 1	5 4		5 to 4		361 125	29⅜ 1	5 3/40 1
5 1	5 4		even		83 25	26 1	4⅖ 1
5 1	even		even		19 5	23 1	3⅘ 1
4 1	4 to 1		4 to 1		61 64	124 1	30¼ 1
4 1	4 1		3 1		13 12	99 1	24 1

4th. Againſt your winning the firſt and ſecond, and loſing the third.			5th. Againſt your loſing the firſt, and winning the ſecond and third.			6th. Againſt your loſing the firſt and ſecond, and winning the third.			7th. Againſt your winning the firſt and third, and loſing the ſecond.			8th. Againſt your loſing the firſt and third, and winning the ſecond.		
$3\frac{1}{8}$	*to*	1	$10\frac{11}{14}$	*to*	1	$46\frac{1}{7}$	*to*	1	9	*to*	1	$19\frac{5}{8}$	*to*	1
$2\frac{3}{4}$		1	$11\frac{1}{2}$		1	49		1	9		1	$17\frac{3}{4}$		1
$2\frac{3}{8}$		1	$12\frac{1}{2}$		1	53		1	$9\frac{4}{5}$		1	$15\frac{7}{8}$		1
2		1	14		1	59		1	11		1	14		1
$5\frac{2}{5}$		1	$9\frac{2}{3}$		1	31		1	$5\frac{2}{5}$		1	31		1
$4\frac{3}{5}$		1	$10\frac{1}{5}$		1	$32\frac{3}{5}$		1	$5\frac{18}{25}$		1	27		1
$3\frac{4}{5}$		1	11		1	35		1	$6\frac{1}{5}$		1	23		1
$3\frac{2}{5}$		1	$11\frac{4}{7}$		1	$36\frac{5}{7}$		1	$6\frac{19}{35}$		1	21		1
3		1	$12\frac{1}{3}$		1	39		1	7		1	19		1
$2\frac{3}{5}$		1	$13\frac{2}{5}$		1	$42\frac{1}{5}$		1	$7\frac{16}{25}$		1	17		1
$2\frac{1}{5}$		1	15		1	47		1	$8\frac{3}{5}$		1	15		1
$4\frac{22}{25}$		1	$10\frac{19}{25}$		1	$28\frac{2}{5}$		1	$4\frac{22}{25}$		1	$28\frac{2}{5}$		1
$4\frac{1}{25}$		1	$11\frac{3}{5}$		1	$30\frac{1}{2}$		1	$5\frac{3}{10}$		1	$24\frac{1}{5}$		1
$3\frac{31}{50}$		1	$12\frac{1}{5}$		1	32		1	$5\frac{3}{5}$		1	$22\frac{1}{10}$		1
$3\frac{1}{5}$		1	13		1	34		1	6		1	20		1
$2\frac{39}{50}$		1	$14\frac{8}{25}$		1	$36\frac{4}{5}$		1	$6\frac{14}{25}$		1	$17\frac{9}{10}$		1
$2\frac{9}{25}$		1	$15\frac{4}{5}$		1	41		1	$7\frac{2}{5}$		1	$15\frac{4}{5}$		1
$4\frac{2}{5}$		1	$12\frac{1}{2}$		1	26		1	$4\frac{2}{5}$		1	26		1
$3\frac{19}{20}$		1	$13\frac{1}{7}$		1	$27\frac{2}{7}$		1	$4\frac{23}{35}$		1	$23\frac{3}{4}$		1
$3\frac{1}{2}$		1	14		1	29		1	5		1	$21\frac{1}{2}$		1
$3\frac{1}{20}$		1	$15\frac{1}{5}$		1	$31\frac{2}{5}$		1	$5\frac{12}{25}$		1	$19\frac{1}{4}$		1
$2\frac{3}{5}$		1	17		1	35		1	$6\frac{1}{5}$		1	17		1
$4\frac{13}{70}$		1	$13\frac{40}{49}$		1	$24\frac{13}{14}$		1	$4\frac{13}{70}$		1	$24\frac{13}{14}$		1
$3\frac{5}{7}$		1	$14\frac{5}{7}$		1	$26\frac{1}{2}$		1	$4\frac{1}{2}$		1	$22\frac{4}{7}$		1
$3\frac{17}{70}$		1	$15\frac{34}{35}$		1	$28\frac{7}{10}$		1	$4\frac{47}{50}$		1	$20\frac{3}{14}$		1
$2\frac{27}{35}$		1	$17\frac{6}{7}$		1	32		1	$5\frac{3}{5}$		1	$17\frac{6}{7}$		1
4		1	$15\frac{2}{3}$		1	24		1	4		1	24		1
$3\frac{1}{2}$		1	17		1	26		1	$4\frac{2}{5}$		1	$21\frac{1}{2}$		1
3		1	19		1	29		1	5		1	19		1
$3\frac{43}{50}$		1	$18\frac{11}{25}$		1	$23\frac{3}{10}$		1	$3\frac{43}{50}$		1	$23\frac{3}{10}$		1
$3\frac{8}{25}$		1	$20\frac{3}{5}$		1	26		1	$4\frac{2}{5}$		1	$20\frac{3}{5}$		1
$3\frac{4}{5}$		1	23		1	28		1	$3\frac{4}{5}$		1	23		1
$6\frac{13}{16}$		1	$6\frac{13}{16}$		1	$30\frac{1}{4}$		1	$6\frac{13}{16}$		1	$30\frac{1}{4}$		1
$5\frac{1}{4}$		1	$7\frac{1}{3}$		1	$32\frac{1}{2}$		1	$7\frac{1}{2}$		1	24		1

THREE EVENTS, all in your favour.					1st Col. Against your winning them all.	2d. Against your losing all.	3d. Against your winning the first, and losing the second and third.
4 to 1	4 to 1		5 to 2		19 to 16	$86\frac{1}{2}$ to 1	$20\frac{7}{8}$ to 1
4 1	4 1		2 1		43 32	74 1	$17\frac{3}{4}$ 1
4 1	4 1		7 4		163 112	$67\frac{3}{4}$ 1	$16\frac{3}{16}$ 1
4 1	4 1		3 2		77 48	$61\frac{1}{2}$ 1	$14\frac{5}{8}$ 1
4 1	4 1		5 4		29 16	$55\frac{1}{4}$ 1	$13\frac{1}{16}$ 1
4 1	4 1		*even*		17 8	49 1	$11\frac{1}{2}$ 1
4 1	3 1		3 to 1		11 9	79 1	19 1
4 1	3 1		5 2		4 3	69 1	$16\frac{1}{2}$ 1
4 1	3 1		2 1		3 2	59 1	14 1
4 1	3 1		7 4		34 21	54 1	$12\frac{3}{4}$ 1
4 1	3 1		3 to 2		16 9	49 1	$11\frac{1}{2}$ 1
4 1	3 1		5 4		2 1	44 1	$10\frac{1}{4}$ 1
4 1	3 1		*even*		7 3	39 1	9 1
4 1	5 2		5 to 2		29 20	$60\frac{1}{4}$ 1	$14\frac{5}{16}$ 1
4 1	5 2		2 1		13 8	$51\frac{1}{2}$ 1	$12\frac{1}{8}$ 1
4 1	5 2	AND	7 4	ARE	7 4	$47\frac{1}{8}$ 1	$11\frac{1}{32}$ 1
4 1	5 2		3 2		23 12	$42\frac{3}{4}$ 1	$9\frac{15}{16}$ 1
4 1	5 2		5 4		43 20	$38\frac{3}{8}$ 1	$8\frac{27}{32}$ 1
4 1	5 2		*even*		5 2	34 1	$7\frac{3}{4}$ 1
4 1	2 1		2 to 1		29 16	44 1	$10\frac{1}{4}$ 1
4 1	2 1		7 4		109 56	$40\frac{1}{4}$ 1	$9\frac{5}{16}$ 1
4 1	2 1		3 2		17 8	$36\frac{1}{2}$ 1	$8\frac{3}{8}$ 1
4 1	2 1		5 4		19 8	$32\frac{3}{4}$ 1	$7\frac{7}{16}$ 1
4 1	2 1		*even*		11 4	29 1	$6\frac{1}{2}$ 1
4 1	7 4		7 to 4		409 196	$36\frac{13}{16}$ 1	$8\frac{29}{64}$ 1
4 1	7 4		3 2		191 84	$33\frac{3}{8}$ 1	$7\frac{19}{32}$ 1
4 1	7 4		5 4		71 28	$29\frac{15}{16}$ 1	$6\frac{47}{64}$ 1
4 1	7 4		*even*		41 14	$26\frac{1}{2}$ 1	$5\frac{7}{8}$ 1
4 1	3 2		3 to 2		89 36	$30\frac{1}{4}$ 1	$6\frac{13}{16}$ 1
4 1	3 2		5 4		11 4	$27\frac{1}{8}$ 1	$6\frac{1}{32}$ 1
4 1	3 2		*even*		19 6	24 1	$5\frac{1}{4}$ 1
4 1	5 4		5 to 4		61 20	$24\frac{5}{16}$ 1	$5\frac{21}{64}$ 1
4 1	5 4		*even*		7 2	$21\frac{1}{2}$ 1	$4\frac{5}{8}$ 1
4 1	*even*		*even*		4 1	19 1	4 1

4th. Againſt your winning the firſt and ſecond, and loſing the third.		5th. Againſt your loſing the firſt, and winning the ſecond and third.		6th. Againſt your loſing the firſt and ſecond, and winning the third.		7th. Againſt your winning the firſt and third, and loſing the ſecond.		8th. Againſt your loſing the firſt and third, and winning the ſecond.	
$4\frac{15}{32}$	*to* 1	$7\frac{3}{4}$	*to* 1	34	*to* 1	$7\frac{3}{4}$	*to* 1	$20\frac{7}{8}$	*to* 1
$3\frac{11}{16}$	1	$8\frac{3}{8}$	1	$36\frac{1}{2}$	1	$8\frac{3}{8}$	1	$17\frac{3}{4}$	1
$3\frac{19}{64}$	1	$8\frac{23}{28}$	1	$38\frac{2}{7}$	1	$8\frac{23}{28}$	1	$16\frac{3}{16}$	1
$2\frac{29}{32}$	1	$9\frac{5}{12}$	1	$40\frac{2}{3}$	1	$9\frac{5}{12}$	1	$14\frac{5}{8}$	1
$2\frac{33}{64}$	1	$10\frac{1}{4}$	1	44	1	$10\frac{1}{4}$	1	$13\frac{1}{16}$	1
$2\frac{1}{8}$	1	$11\frac{1}{2}$	1	49	1	$11\frac{1}{2}$	1	$11\frac{1}{2}$	1
$5\frac{2}{3}$	1	$7\frac{8}{9}$	1	$25\frac{2}{3}$	1	$5\frac{2}{5}$	1	$25\frac{2}{3}$	1
$4\frac{5}{6}$	1	$8\frac{1}{3}$	1	27	1	6	1	$22\frac{1}{3}$	1
4	1	9	1	29	1	$6\frac{1}{2}$	1	19	1
$3\frac{7}{12}$	1	$9\frac{10}{21}$	1	$30\frac{3}{7}$	1	$6\frac{6}{7}$	1	$17\frac{1}{3}$	1
$3\frac{1}{6}$	1	$10\frac{1}{9}$	1	$32\frac{1}{2}$	1	$7\frac{1}{3}$	1	$15\frac{2}{3}$	1
$2\frac{3}{4}$	1	11	1	35	1	8	1	14	1
$2\frac{1}{3}$	1	$12\frac{1}{3}$	1	39	1	9	1	$12\frac{1}{3}$	1
$5\frac{1}{8}$	1	$8\frac{4}{5}$	1	$23\frac{1}{2}$	1	$5\frac{1}{8}$	1	$23\frac{1}{2}$	1
$4\frac{1}{4}$	1	$9\frac{1}{2}$	1	$25\frac{1}{4}$	1	$5\frac{9}{16}$	1	20	1
$3\frac{13}{16}$	1	10	1	$26\frac{1}{2}$	1	$5\frac{7}{8}$	1	$18\frac{1}{4}$	1
$3\frac{3}{8}$	1	$10\frac{2}{3}$	1	$28\frac{1}{6}$	1	$6\frac{7}{24}$	1	$16\frac{1}{2}$	1
$2\frac{15}{16}$	1	$11\frac{3}{5}$	1	$30\frac{1}{2}$	1	$6\frac{7}{8}$	1	$14\frac{3}{4}$	1
5	2	13	1	34	1	$7\frac{3}{4}$	1	13	1
$4\frac{5}{8}$	1	$10\frac{1}{4}$	1	$21\frac{1}{2}$	1	$4\frac{5}{8}$	1	$21\frac{1}{2}$	1
$4\frac{5}{32}$	1	$10\frac{11}{14}$	1	$22\frac{4}{7}$	1	$4\frac{25}{28}$	1	$19\frac{5}{8}$	1
$3\frac{11}{16}$	1	$11\frac{1}{2}$	1	24	1	$5\frac{1}{4}$	1	$17\frac{3}{4}$	1
$3\frac{7}{32}$	1	$12\frac{1}{2}$	1	26	1	$5\frac{3}{4}$	1	$15\frac{7}{8}$	1
$2\frac{3}{4}$	1	14	1	29	1	$6\frac{1}{2}$	1	14	1
$4\frac{45}{112}$	1	$11\frac{17}{49}$	1	$20\frac{17}{28}$	1	$4\frac{45}{112}$	1	$20\frac{17}{28}$	1
$3\frac{51}{56}$	1	$12\frac{2}{21}$	1	$21\frac{11}{12}$	1	$4\frac{5}{48}$	1	$18\frac{9}{14}$	1
$3\frac{47}{112}$	1	$13\frac{1}{7}$	1	$23\frac{3}{4}$	1	$5\frac{3}{16}$	1	$16\frac{19}{28}$	1
$2\frac{13}{14}$	1	$14\frac{5}{7}$	1	$26\frac{1}{2}$	1	$5\frac{7}{8}$	1	$14\frac{5}{7}$	1
$4\frac{5}{24}$	1	$12\frac{8}{9}$	1	$19\frac{5}{6}$	1	$4\frac{3}{24}$	1	$19\frac{5}{6}$	1
$3\frac{33}{48}$	1	14	1	$21\frac{1}{2}$	1	$4\frac{5}{8}$	1	$17\frac{3}{4}$	1
$3\frac{1}{6}$	1	$15\frac{2}{3}$	1	24	1	$5\frac{1}{4}$	1	$15\frac{2}{3}$	1
$4\frac{1}{16}$	1	$15\frac{1}{15}$	1	$19\frac{1}{4}$	1	$4\frac{1}{16}$	1	$19\frac{1}{4}$	1
$3\frac{1}{2}$	1	17	1	$21\frac{1}{2}$	1	$4\frac{5}{8}$	1	17	1
4	1	19	1	19	1	4	1	19	1

THREE EVENTS, all in your favour.					1ſt. Againſt your winning them all.	2d. Againſt your loſing all.	3d. Againſt your winning the firſt, and loſing the ſecond and third.
3 *to* 1	3 *to* 1		3 *to* 1		37 *to* 27	63 *to* 1	$20\frac{1}{3}$ *to* 1
3 1	3 1		5 2		67 45	55 1	$17\frac{2}{3}$ 1
3 1	3 1		2 1		5 3	47 1	15 1
3 1	3 1		7 4		113 63	43 1	$13\frac{2}{3}$ 1
3 1	3 1		3 2		53 27	39 1	$12\frac{1}{3}$ 1
3 1	3 1		5 4		99 45	35 1	11 1
3 1	3 1		*even*		23 9	31 1	$9\frac{2}{3}$ 1
3 1	5 2		5 *to* 2		121 75	48 1	$15\frac{1}{3}$ 1
3 1	5 2		2 1		9 5	41 1	13 1
3 1	5 2		7 4		29 15	$37\frac{1}{2}$ 1	$11\frac{5}{6}$ 1
3 1	5 2		3 2		19 9	34 1	$10\frac{2}{3}$ 1
3 1	5 2		5 4		59 25	$30\frac{1}{2}$ 1	$9\frac{1}{2}$ 1
3 1	5 2		*even*		41 15	27 1	$8\frac{1}{3}$ 1
3 1	2 1		2 *to* 1		2 1	35 1	11 1
3 1	2 1		7 4		15 7	32 1	10 1
3 1	2 1	AND	3 2	ARE	7 3	29 1	9 1
3 1	2 1		5 4		13 5	26 1	8 1
3 1	2 1		*even*		3 1	23 1	7 1
3 1	7 4		7 *to* 4		337 147	$29\frac{1}{4}$ 1	$9\frac{1}{12}$ 1
3 1	7 4		3 2		157 63	$26\frac{1}{2}$ 1	$8\frac{1}{6}$ 1
3 1	7 4		5 4		97 35	$23\frac{3}{4}$ 1	$7\frac{1}{4}$ 1
3 1	7 4		*even*		67 21	21 1	$6\frac{1}{3}$ 1
3 1	3 2		3 *to* 2		73 27	24 1	$7\frac{1}{3}$ 1
3 1	3 2		5 4		3 1	$21\frac{1}{2}$ 1	$6\frac{1}{2}$ 1
3 1	3 2		*even*		31 9	19 1	$5\frac{2}{3}$ 1
3 1	5 4		5 *to* 4		83 25	$19\frac{1}{4}$ 1	$5\frac{3}{4}$ 1
3 1	5 4		*even*		19 5	17 1	5 1
3 1	*even*		*even*		13 3	15 1	$4\frac{1}{3}$ 1
5 2	5 *to* 2		5 *to* 2		218 125	$41\frac{7}{8}$ 1	$16\frac{3}{20}$ 1
5 2	5 2		2 1		97 50	$35\frac{3}{4}$ 1	$13\frac{7}{10}$ 1
5 2	5 2		7 4		52 27	$32\frac{11}{16}$ 1	$12\frac{19}{40}$ 1
5 2	5 2		3 2		34 15	$29\frac{5}{8}$ 1	$11\frac{1}{4}$ 1
5 2	5 2		5 4		316 125	$26\frac{9}{16}$ 1	$10\frac{1}{40}$ 1
5 2	5 2		*even*		73 25	$23\frac{1}{2}$ 1	$8\frac{4}{5}$ 1

4th. Againſtyour winning the firſt and ſecond, and loſing the third.		5th. Againſtyour loſing the firſt, and winning the ſecond and third.		6th. Againſtyour loſing the firſt and ſecond, and winning the third.		7th. Againſtyour winning the firſt and third, and loſing the ſecond.		8th. Againſtyour loſing the firſt and third, and winning the ſecond.	
$6\frac{1}{9}$	*to* 1	$6\frac{1}{9}$	*to* 1	$20\frac{1}{3}$	*to* 1	$6\frac{1}{9}$	*to* 1	$20\frac{1}{3}$	*to* 1
$5\frac{2}{9}$	1	$6\frac{7}{15}$	1	$21\frac{2}{5}$	1	$6\frac{7}{15}$	1	$17\frac{2}{3}$	1
$4\frac{1}{3}$	1	7	1	23	1	7	1	15	1
$3\frac{8}{9}$	1	$7\frac{8}{21}$	1	$24\frac{1}{7}$	1	$7\frac{8}{21}$	1	$13\frac{2}{5}$	1
$3\frac{4}{9}$	1	$7\frac{8}{9}$	1	$25\frac{2}{3}$	1	$7\frac{8}{9}$	1	$12\frac{1}{3}$	1
3	1	$8\frac{9}{15}$	1	$27\frac{4}{5}$	1	$8\frac{9}{15}$	1	11	1
$2\frac{5}{9}$	1	$9\frac{2}{3}$	1	31	1	$9\frac{2}{3}$	1	$9\frac{2}{3}$	1
$5\frac{8}{15}$	1	$6\frac{21}{25}$	1	$18\frac{3}{5}$	1	$5\frac{8}{15}$	1	$18\frac{3}{5}$	1
$4\frac{9}{15}$	1	$7\frac{2}{5}$	1	20	1	6	1	$15\frac{4}{5}$	1
$4\frac{2}{15}$	1	$7\frac{4}{5}$	1	21	1	$6\frac{1}{3}$	1	$14\frac{2}{5}$	1
$3\frac{2}{3}$	1	$8\frac{1}{3}$	1	22	1	$6\frac{7}{9}$	1	13	1
$3\frac{1}{5}$	1	$9\frac{2}{25}$	1	$24\frac{1}{5}$	1	$7\frac{2}{5}$	1	$11\frac{3}{5}$	1
$2\frac{11}{15}$	1	$10\frac{1}{5}$	1	27	1	$8\frac{1}{3}$	1	$10\frac{1}{5}$	1
5	1	8	1	17	1	5	1	17	1
$4\frac{1}{2}$	1	$8\frac{3}{7}$	1	$17\frac{6}{7}$	1	$5\frac{2}{7}$	1	$15\frac{1}{2}$	1
4	1	9	1	19	1	$5\frac{2}{3}$	1	14	1
$3\frac{1}{2}$	1	$9\frac{4}{5}$	1	$20\frac{3}{5}$	1	$6\frac{1}{5}$	1	$12\frac{1}{2}$	1
3	1	11	1	23	1	7	1	11	1
$4\frac{16}{21}$	1	$8\frac{43}{49}$	1	$16\frac{2}{7}$	1	$4\frac{16}{21}$	1	$16\frac{2}{7}$	1
$4\frac{5}{21}$	1	$9\frac{10}{21}$	1	$17\frac{1}{3}$	1	$5\frac{1}{9}$	1	$14\frac{5}{7}$	1
$3\frac{5}{7}$	1	$10\frac{11}{35}$	1	$18\frac{4}{5}$	1	$5\frac{3}{5}$	1	$13\frac{1}{7}$	1
$3\frac{4}{21}$	1	$11\frac{4}{7}$	1	21	1	$6\frac{1}{3}$	1	$11\frac{4}{7}$	1
$4\frac{5}{9}$	1	$10\frac{1}{9}$	1	$15\frac{2}{3}$	1	$4\frac{5}{9}$	1	$15\frac{2}{3}$	1
4	1	11	1	17	1	5	1	14	1
$3\frac{4}{9}$	1	$12\frac{1}{3}$	1	19	1	$5\frac{2}{3}$	1	$12\frac{1}{3}$	1
$4\frac{2}{5}$	1	$11\frac{24}{25}$	1	$15\frac{1}{5}$	1	$4\frac{2}{5}$	1	$15\frac{1}{5}$	1
$3\frac{4}{5}$	1	$13\frac{2}{5}$	1	17	1	5	1	$13\frac{2}{5}$	1
$4\frac{1}{3}$	1	15	1	15	1	$4\frac{1}{3}$	1	15	1
$5\frac{43}{50}$	1	$5\frac{43}{50}$	1	$16\frac{3}{20}$	1	$5\frac{43}{50}$	1	$16\frac{3}{20}$	1
$4\frac{22}{25}$	1	$6\frac{7}{20}$	1	$17\frac{3}{8}$	1	$6\frac{7}{20}$	1	$13\frac{7}{20}$	1
$4\frac{39}{100}$	1	$6\frac{49}{70}$	1	$18\frac{1}{4}$	1	$6\frac{49}{70}$	1	$12\frac{19}{40}$	1
$3\frac{9}{10}$	1	$7\frac{1}{6}$	1	$19\frac{5}{12}$	1	$7\frac{1}{6}$	1	$11\frac{1}{4}$	1
$3\frac{41}{100}$	1	$7\frac{41}{50}$	1	$21\frac{1}{20}$	1	$7\frac{41}{50}$	1	$10\frac{1}{40}$	1
$2\frac{23}{25}$	1	$8\frac{4}{5}$	1	$23\frac{1}{2}$	1	$8\frac{4}{5}$	1	$8\frac{4}{5}$	1

Three Events, all in your favour.								1ſt Col. Againſt your winning them all.		2d. Againſt your loſing all.		3d. Againſt your winning the firſt, and loſing the ſecond and third.	
5 *to*	2	2 *to*	1		2 *to*	1		43 *to*	20	$30\frac{1}{2}$ *to*	1	$11\frac{3}{5}$ *to*	1
5	2	2	1		7	4		161	70	$27\frac{7}{8}$	1	$10\frac{11}{20}$	1
5	2	2	1		3	2		5	2	$25\frac{1}{4}$	1	$9\frac{1}{2}$	1
5	2	2	1		5	4		139	50	$22\frac{5}{8}$	1	$8\frac{9}{20}$	1
5	2	2	1		*even*			32	10	20	1	$7\frac{2}{5}$	1
5	2	7	4		7 *to*	4		86	35	$25\frac{15}{32}$	1	$9\frac{47}{80}$	1
5	2	7	4		3	2		8	3	$23\frac{1}{16}$	1	$8\frac{5}{8}$	1
5	2	7	4		5	4		74	27	$20\frac{21}{32}$	1	$7\frac{53}{80}$	1
5	2	7	4		*even*			$3\frac{2}{5}$	1	$18\frac{1}{4}$	1	$6\frac{7}{10}$	1
5	2	3	2		3 *to*	2		26	9	$20\frac{7}{8}$	1	$7\frac{3}{4}$	1
5	2	3	2		5	4		$3\frac{1}{5}$	1	$18\frac{11}{16}$	1	$6\frac{7}{80}$	1
5	2	3	2		*even*			11	3	$16\frac{1}{2}$	1	6	1
5	2	5	4		5 *to*	4		$3\frac{67}{125}$	1	$16\frac{23}{32}$	1	$6\frac{7}{80}$	1
5	2	5	4		*even*			101	25	$14\frac{3}{4}$	1	$5\frac{3}{10}$	1
5	2	*even*			*even*			23	5	13	1	$4\frac{3}{5}$	1
2	1	2 *to*	1	AND	2 *to*	1	ARE	19	8	26	1	$12\frac{1}{2}$	1
2	1	2	1		7	4		71	28	$23\frac{3}{4}$	1	$11\frac{3}{8}$	1
2	1	2	1		3	2		33	12	$21\frac{1}{2}$	1	$10\frac{1}{4}$	1
2	1	2	1		5	4		61	20	$19\frac{1}{4}$	1	$9\frac{1}{8}$	1
2	1	2	1		*even*			$3\frac{1}{2}$	1	17	1	8	1
2	1	7	4		7 *to*	4		265	98	$21\frac{11}{16}$	1	$10\frac{11}{32}$	1
2	1	7	4		3	2		41	14	$19\frac{5}{8}$	1	$9\frac{5}{16}$	1
2	1	7	4		5	4		227	70	$17\frac{9}{16}$	1	$8\frac{9}{32}$	1
2	1	7	4		*even*			52	14	$15\frac{1}{2}$	1	$7\frac{1}{4}$	1
2	1	3	2		3 *to*	2		57	18	$17\frac{3}{4}$	1	$8\frac{3}{8}$	1
2	1	3	2		5	4		$3\frac{1}{2}$	1	$15\frac{7}{8}$	1	$7\frac{7}{16}$	1
2	1	3	2		*even*			4	1	14	1	$6\frac{1}{2}$	1
2	1	5	4		5 *to*	4		$3\frac{43}{50}$	1	$14\frac{3}{16}$	1	$6\frac{19}{32}$	1
2	1	5	4		*even*			44	10	$12\frac{1}{2}$	1	$5\frac{3}{4}$	1
2	1	*even*			*even*			5	1	11	1	5	1
7	4	7 *to*	4		7 *to*	4		988	343	$19\frac{51}{64}$	1	$10\frac{99}{112}$	1
7	4	7	4		3	2		458	147	$17\frac{29}{32}$	1	$9\frac{45}{56}$	1
7	4	7	4		5	4		844	245	$16\frac{61}{64}$	1	$8\frac{81}{112}$	1
7	4	7	4		*even*			$3\frac{46}{49}$	1	$14\frac{1}{8}$	1	$7\frac{9}{14}$	1

4th. Againſt your winning the firſt and ſecond, and loſing the third.		5th. Againſt your loſind the firſt, and wining the ſecond and third.		6th, Againſt your loſing the firſt and ſecond, and winning the third.		7th. Againſt your winning the firſt and third, and loſing the ſecond.		8th. Againſt you loſing the firſt and third, and winning the ſecond.	
$5\frac{3}{10}$	*to* 1	$6\frac{7}{8}$	*to* 1	$14\frac{3}{4}$	*to* 1	$5\frac{3}{10}$	*to* 1	$14\frac{3}{4}$	*to* 1
$4\frac{31}{40}$	1	$7\frac{1}{4}$	1	$15\frac{1}{2}$	1	$5\frac{3}{5}$	1	$13\frac{7}{16}$	1
$4\frac{1}{4}$	1	$7\frac{3}{4}$	1	$16\frac{1}{2}$	1	6	1	$12\frac{1}{8}$	1
$3\frac{29}{40}$	1	$8\frac{9}{20}$	1	$17\frac{9}{10}$	1	$6\frac{14}{25}$	1	$10\frac{13}{16}$	1
$3\frac{1}{5}$	1	$9\frac{1}{2}$	1	20	1	$7\frac{2}{5}$	1	$9\frac{1}{2}$	1
$5\frac{1}{20}$	1	$7\frac{63}{98}$	1	$14\frac{1}{8}$	1	$5\frac{1}{20}$	1	$14\frac{1}{8}$	1
$4\frac{1}{2}$	1	$8\frac{1}{6}$	1	$15\frac{1}{24}$	1	$5\frac{5}{12}$	1	$12\frac{3}{4}$	1
$3\frac{19}{20}$	1	$8\frac{9}{10}$	1	$16\frac{1}{40}$	1	$5\frac{93}{100}$	1	$11\frac{3}{8}$	1
$3\frac{2}{5}$	1	10	1	$18\frac{1}{4}$	1	$6\frac{7}{10}$	1	10	1
$4\frac{5}{6}$	1	$8\frac{13}{18}$	1	$13\frac{7}{12}$	1	$4\frac{5}{6}$	1	$13\frac{7}{12}$	1
$4\frac{1}{4}$	1	$9\frac{1}{2}$	1	$14\frac{3}{4}$	1	$5\frac{3}{10}$	1	$12\frac{1}{8}$	1
$3\frac{[illegible]}{5}$	1	$10\frac{2}{3}$	1	$16\frac{1}{2}$	1	6	1	$10\frac{2}{3}$	1
$4\frac{67}{100}$	1	$10\frac{17}{50}$	1	$13\frac{7}{40}$	1	$4\frac{67}{100}$	1	$13\frac{7}{40}$	1
$4\frac{1}{25}$	1	$11\frac{3}{5}$	1	$14\frac{3}{4}$	1	$5\frac{3}{10}$	1	$11\frac{3}{5}$	1
$4\frac{3}{5}$	1	13	1	13	1	$4\frac{3}{5}$	1	13	1
$5\frac{3}{4}$	1	$5\frac{3}{4}$	1	$12\frac{1}{2}$	1	$5\frac{3}{4}$	1	$12\frac{1}{2}$	1
$5\frac{13}{16}$	1	$6\frac{1}{14}$	1	$13\frac{1}{7}$	1	$6\frac{1}{14}$	1	$11\frac{3}{8}$	1
$4\frac{5}{8}$	1	$6\frac{1}{2}$	1	14	1	$6\frac{1}{2}$	1	$10\frac{1}{4}$	1
$4\frac{1}{16}$	1	$7\frac{1}{10}$	1	$15\frac{1}{5}$	1	$7\frac{1}{10}$	1	$9\frac{1}{8}$	1
$3\frac{1}{2}$	1	8	1	17	1	8	1	8	1
$5\frac{27}{36}$	1	$6\frac{20}{49}$	1	$11\frac{27}{28}$	1	$5\frac{27}{36}$	1	$11\frac{27}{28}$	1
$4\frac{25}{28}$	1	$6\frac{6}{7}$	1	$12\frac{3}{4}$	1	$5\frac{7}{8}$	1	$10\frac{11}{14}$	1
$4\frac{17}{56}$	1	$7\frac{17}{35}$	1	$13\frac{17}{20}$	1	$6\frac{17}{40}$	1	$9\frac{17}{28}$	1
$3\frac{5}{7}$	1	$8\frac{3}{7}$	1	$15\frac{1}{2}$	1	$7\frac{1}{4}$	1	$8\frac{3}{7}$	1
$5\frac{1}{4}$	1	$7\frac{1}{3}$	1	$11\frac{1}{2}$	1	$5\frac{1}{4}$	1	$11\frac{1}{2}$	1
$4\frac{15}{24}$	1	8	1	$12\frac{1}{2}$	1	$5\frac{3}{4}$	1	$10\frac{1}{4}$	1
4	1	9	1	14	1	$6\frac{1}{2}$	1	9	1
$5\frac{3}{40}$	1	$8\frac{18}{25}$	1	$11\frac{3}{20}$	1	$5\frac{3}{40}$	1	$11\frac{3}{20}$	1
$4\frac{2}{5}$	1	$9\frac{4}{5}$	1	$12\frac{1}{2}$	1	$5\frac{3}{4}$	1	$9\frac{4}{5}$	1
5	1	11	1	11	1	5	1	11	1
$5\frac{155}{196}$	1	$5\frac{155}{196}$	1	$10\frac{99}{112}$	1	$5\frac{155}{196}$	1	$10\frac{99}{112}$	1
$5\frac{17}{98}$	1	$6\frac{17}{84}$	1	$11\frac{29}{48}$	1	$6\frac{17}{84}$	1	$9\frac{45}{56}$	1
$4\frac{109}{196}$	1	$6\frac{109}{140}$	1	$12\frac{49}{80}$	1	$6\frac{109}{140}$	1	$8\frac{81}{112}$	1
$3\frac{46}{49}$	1	$7\frac{9}{14}$	1	$14\frac{1}{8}$	1	$7\frac{9}{14}$	1	$7\frac{9}{14}$	1

THREE EVENTS, all in your favour.					1ſt Col. Againſt your winning them all.	2d. Againſt your loſing all.	3d. Againſt your winning the firſt, and loſing the ſecond and third.
7 *to* 4	3 *to* 2		3 *to* 2		$3\frac{23}{63}$ *to* 1	$16\frac{3}{16}$ *to* 1	$8\frac{23}{28}$ 1
7 4	3 2		5 4		$3\frac{6}{7}$ 1	$14\frac{15}{32}$ 1	$7\frac{47}{56}$ 1
7 4	3 2		*even*		$4\frac{5}{21}$ 1	$12\frac{3}{4}$ 1	$6\frac{6}{7}$ 1
7 4	5 4		5 *to* 4		$4\frac{16}{175}$ 1	$12\frac{59}{64}$ 1	$6\frac{107}{112}$ 1
7 4	5 4		*even*		$4\frac{23}{35}$ 1	$11\frac{3}{8}$ 1	$6\frac{1}{14}$ 1
7 4	*even*		*even*		$5\frac{2}{7}$ 1	10 1	$5\frac{2}{7}$ 1
3 2	3 *to* 2	AND	3 *to* 2	ARE	$3\frac{17}{27}$ 1	$14\frac{5}{8}$ 1	$9\frac{5}{12}$ 1
3 2	3 2		5 4		4 1	$13\frac{1}{16}$ 1	$8\frac{9}{24}$ 1
3 2	3 2		*even*		$4\frac{5}{9}$ 1	$11\frac{1}{2}$ 1	$7\frac{1}{3}$ 1
3 2	5 4		5 *to* 4		$4\frac{2}{5}$ 1	$11\frac{21}{32}$ 1	$7\frac{7}{16}$ 1
3 2	5 4		*even*		5 1	$10\frac{1}{4}$ 1	$6\frac{1}{2}$ 1
3 2	*even*		*even*		$5\frac{2}{3}$ 1	9 1	$5\frac{2}{3}$ 1
5 4	5 *to* 4		5 *to* 4		$4\frac{104}{125}$ 1	$10\frac{25}{64}$ 1	$8\frac{9}{80}$ 1
5 4	5 4		*even*		$5\frac{12}{25}$ 1	$9\frac{1}{8}$ 1	$7\frac{1}{10}$ 1
5 4	*even*		*even*		$6\frac{1}{5}$ 1	8 1	$6\frac{1}{5}$ 1
even	*even*		*even*		7 1	7 1	7 1

4th. Againſt your winning the firſt and ſecond, and loſing the third.		5th. Againſt your loſing the firſt, and winning the ſecond and third.		6th. Againſt your loſing the firſt and ſecond, and winning the third.		7th. Againſt your winning the firſt and third, and loſing the ſecond.		8th. Againſt your loſing the firſt and third, and winning the ſecond.	
$5\frac{23}{42}$ *to*	1	$6\frac{23}{36}$ *to*	1	$10\frac{11}{24}$ *to*	1	$5\frac{23}{42}$ *to*	1	$10\frac{11}{24}$ *to*	1
$4\frac{25}{28}$	1	$7\frac{1}{4}$	1	$11\frac{3}{8}$	1	$6\frac{1}{14}$	1	$9\frac{5}{16}$	1
$4\frac{5}{21}$	1	$8\frac{1}{6}$	1	$12\frac{3}{4}$	1	$6\frac{6}{7}$	1	$8\frac{1}{6}$	1
$5\frac{51}{140}$	1	$7\frac{91}{100}$	1	$10\frac{11}{80}$	1	$5\frac{51}{140}$	1	$10\frac{11}{80}$	1
$4\frac{23}{35}$	1	$8\frac{9}{10}$	1	$11\frac{3}{8}$	1	$6\frac{1}{14}$	1	$8\frac{9}{10}$	1
$5\frac{2}{7}$	1	10	1	10	1	$5\frac{2}{7}$	1	10	1
$5\frac{17}{18}$	1	$5\frac{17}{18}$	1	$9\frac{5}{12}$	1	$5\frac{17}{18}$	1	$9\frac{5}{12}$	1
$5\frac{1}{4}$	1	$6\frac{1}{2}$	1	$10\frac{1}{4}$	1	$6\frac{1}{2}$	1	$8\frac{9}{24}$	1
$4\frac{5}{9}$	1	$7\frac{1}{3}$	1	$11\frac{1}{2}$	1	$7\frac{1}{3}$	1	$7\frac{1}{3}$	1
$5\frac{3}{4}$	1	$7\frac{1}{10}$	1	$9\frac{1}{8}$	1	$5\frac{3}{4}$	1	$9\frac{1}{8}$	1
5	1	8	1	$10\frac{1}{4}$	1	$6\frac{1}{2}$	1	8	1
$5\frac{2}{3}$	1	9	1	9	1	$5\frac{2}{3}$	1	9	1
$6\frac{29}{100}$	1	$6\frac{29}{100}$	1	$8\frac{9}{80}$	1	$6\frac{29}{100}$	1	$8\frac{9}{80}$	1
$5\frac{12}{25}$	1	$7\frac{1}{10}$	1	$9\frac{1}{8}$	1	$7\frac{1}{10}$	1	$7\frac{1}{10}$	1
$6\frac{1}{5}$	1	8	1	8	1	$6\frac{1}{5}$	1	8	1
7	1	7	1	7	1	7	1	7	1

EXPLANATIONS
OF THE
FOREGOING TABLES.

SUPPOSE you have three events depending, on the firſt of which it is ſix to one for you, on the ſecond and third it is three to one and two to one againſt you, and that you want to know what the odds are againſt your winning them all, you are to look for the page and line where 6 to 1, 3 to 1, and 2 to 1, all in your favour, ſtand in the third column where it is written at the top againſt your winning the firſt and loſing the ſecond and third, in which you will find it to be thirteen to one againſt you; and is operated thus: $\frac{6}{7} \times \frac{1}{4} \times \frac{1}{3} = \frac{6}{84}$, $84 - 6 = 78$ to 6, which being contracted, is thirteen to one, as in the table.

Suppoſe it to be five to two for you on the firſt, five to two and five to four againſt you on the ſecond and third, what are the odds by the tables againſt your winning them all? Look for the line wherein you have 5 to 2, 5 to 2, and 5 to 4, all in your favour, and in the third column you have $10\frac{1}{40}$ to 1. —The operation ſtands thus: $\frac{5}{7}\times\frac{2}{7}\times\frac{4}{9}=\frac{4}{441}$: 441—40=401 to 40, and contracted, by dividing 401 by 40, you will have $10\frac{1}{40}$ to 1, as in the table.

Suppoſe it to be four to one againſt you on the firſt, three to one for you on the ſecond, and three to two for you on the third, what are the odds by the tables againſt your winning them all? Look for the line where it ſtands four to one, three to one, and three to two, all in your favour, and in the fifth column (marked, againſt your loſing the firſt, and winning the ſecond and third) you will ſee it to be $10\frac{1}{9}$ to 1, as per operation $\frac{1}{5}\times\frac{3}{4}\times\frac{3}{5}=\frac{9}{100}$, as per tables.

I flatter myſelf that theſe explanations on the tables of Three Events, with thoſe on

Two Events, will be a ſufficient guide to ſearch out the odds on any dependence that may occur in them ; for were I to give any more examples, it might be attended with too much prolixity:—therefore I will finiſh with making this obſervation,—which is, that theſe tables not only ſerve to give a ſolution, but may be of great utility to thoſe who are inclinable to practice by them, ſo as to make themſelves perfect and capable in finding the odds to any two or three complicated events that may happen.

FINIS.

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